

MANUFACTURERS' RECORD

A WEEKLY SOUTHERN INDUSTRIAL
RAILROAD AND FINANCIAL NEWSPAPER.

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A Forecast

of the

World's Iron Trade

by

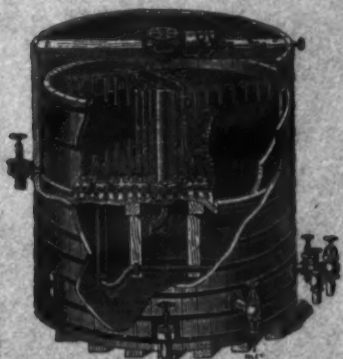
MR. EDWARD ATKINSON.

THE FULL TABLE OF CONTENTS WILL BE FOUND ON PAGE 126.

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No. 7.

Baltimore, September 8, 1899.



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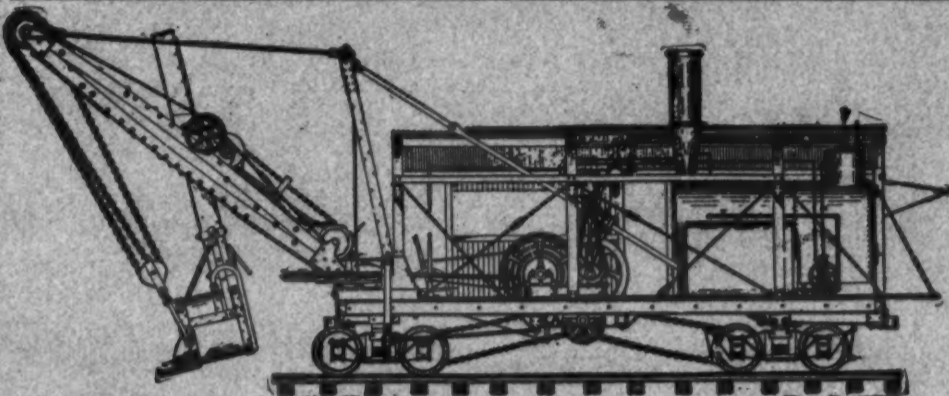
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For ALPHABETICAL INDEX See Page 22.

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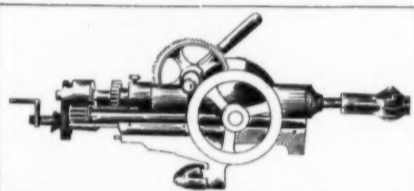
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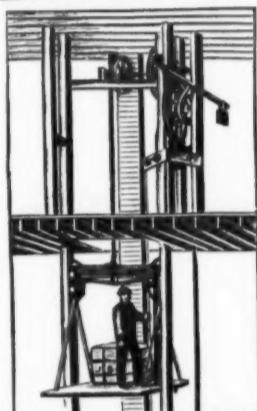
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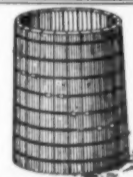
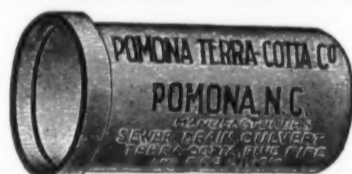
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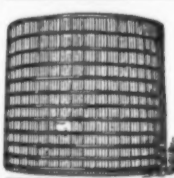
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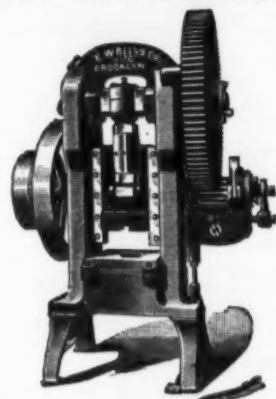
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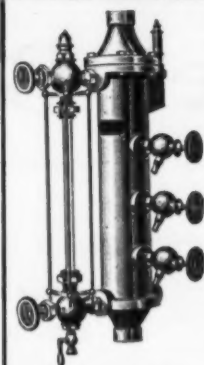
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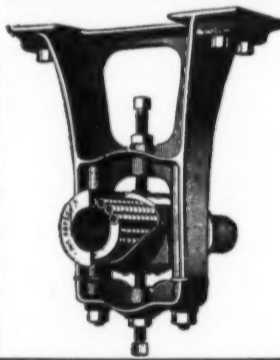
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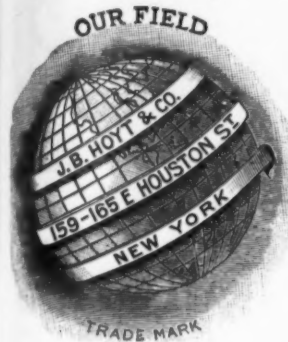
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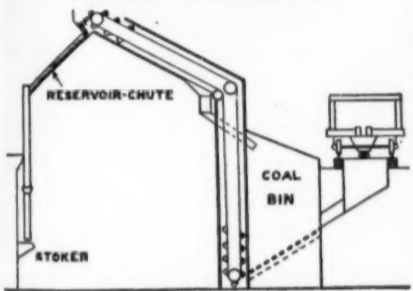
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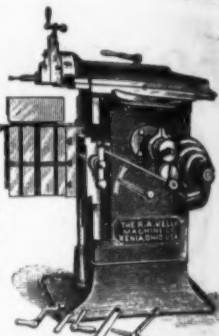
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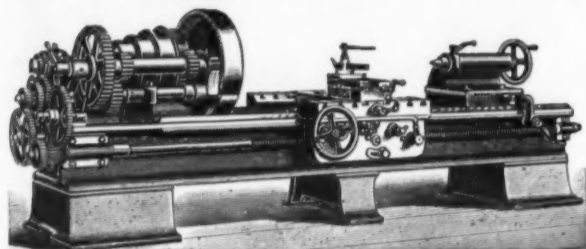
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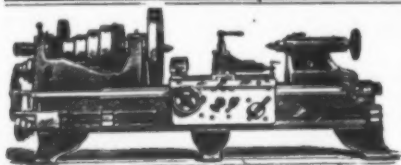
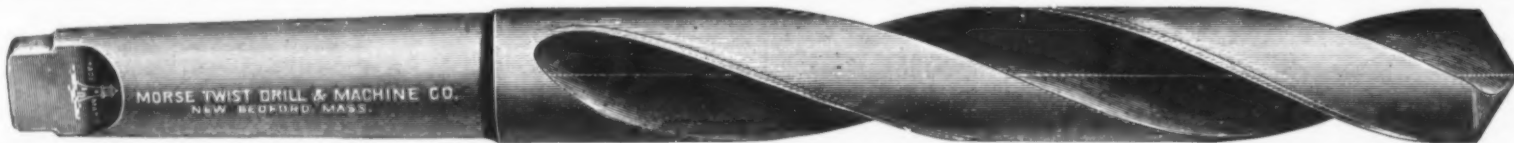
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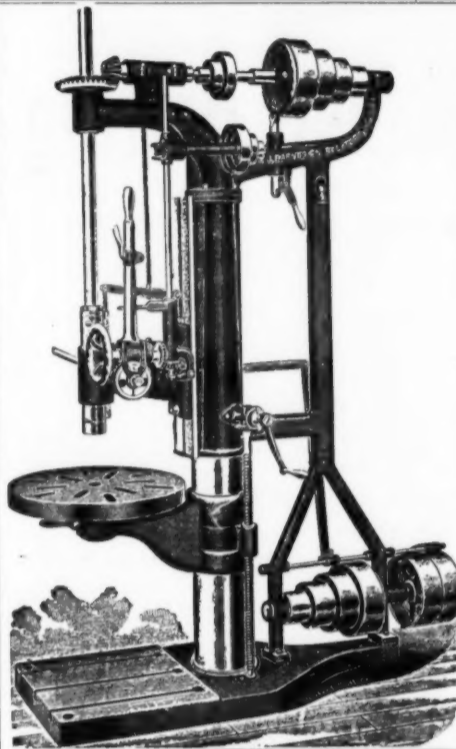
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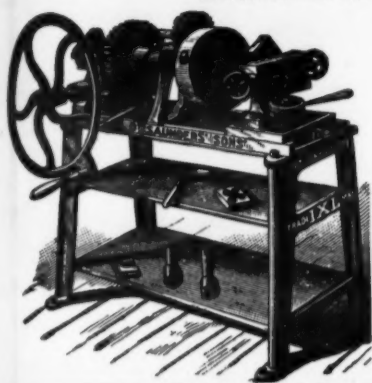
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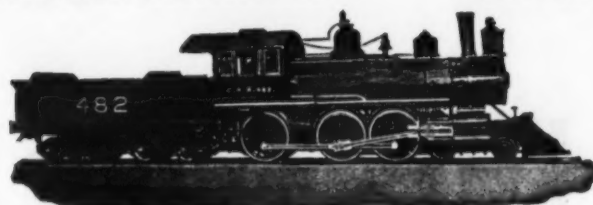
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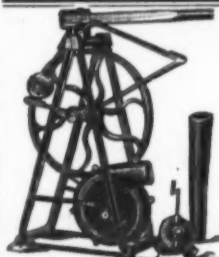
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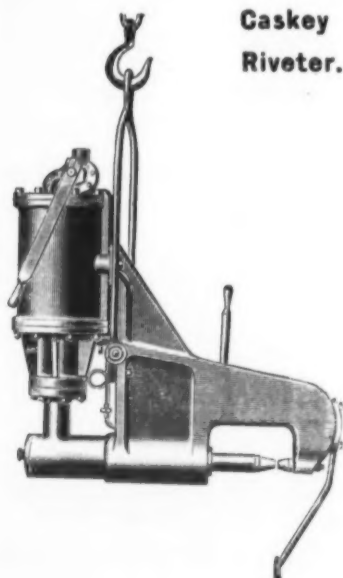
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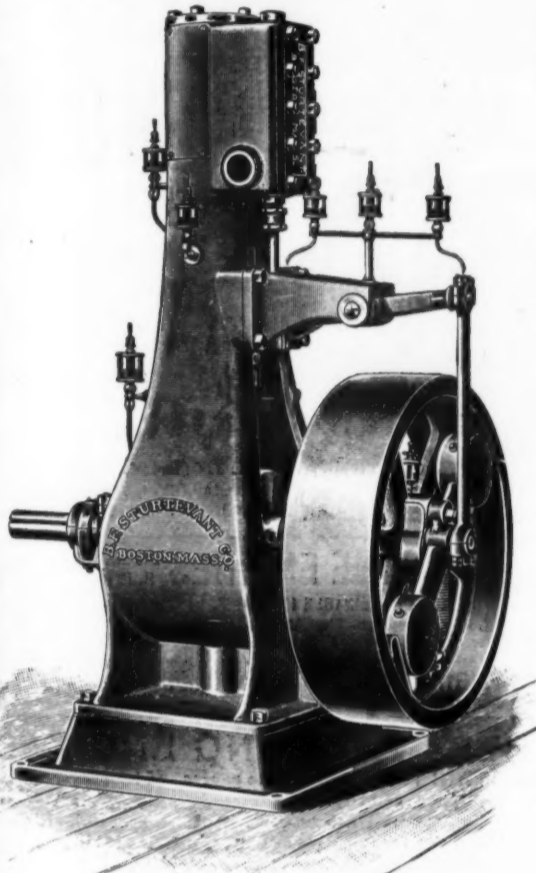
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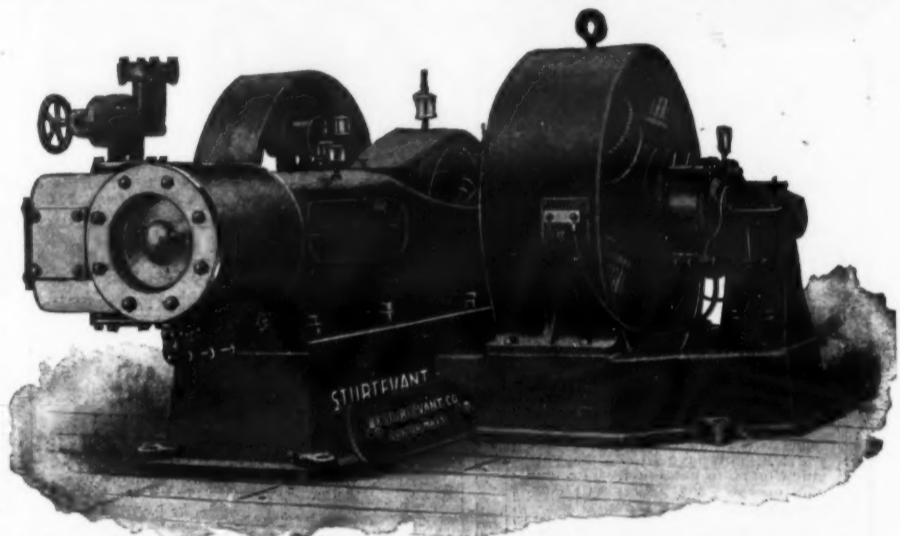
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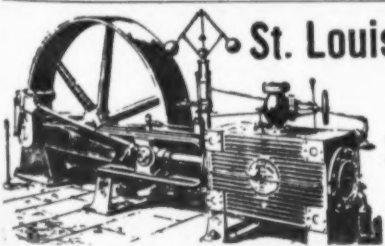
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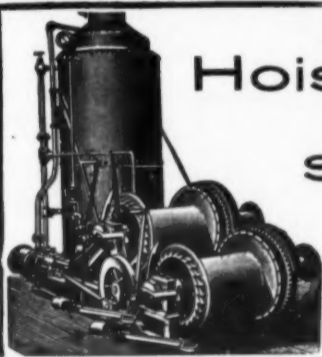
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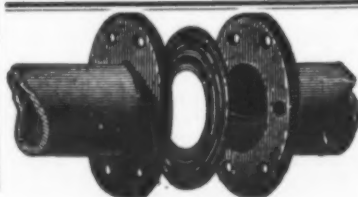
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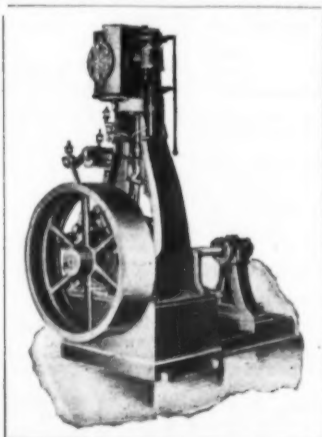
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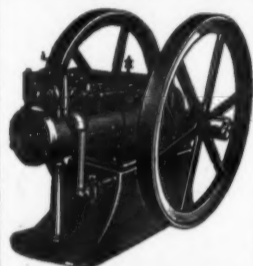
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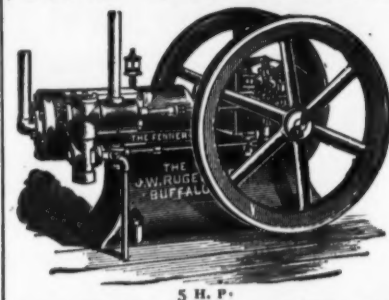
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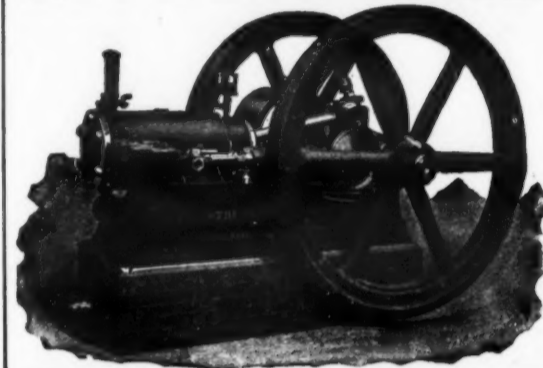
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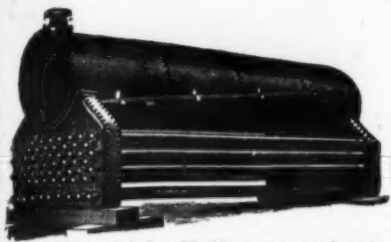
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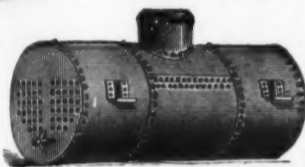
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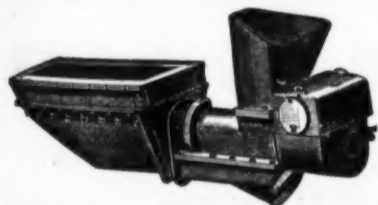
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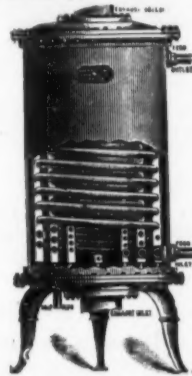
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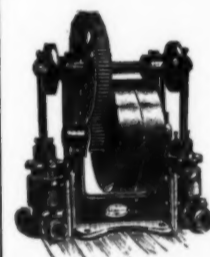
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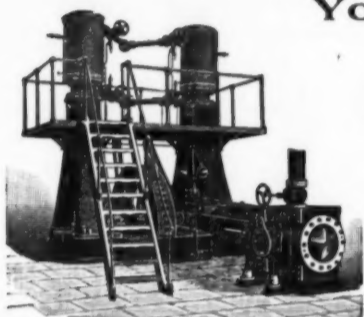
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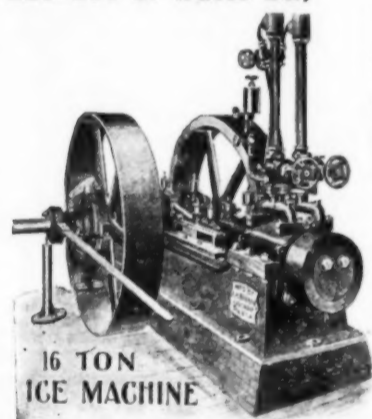
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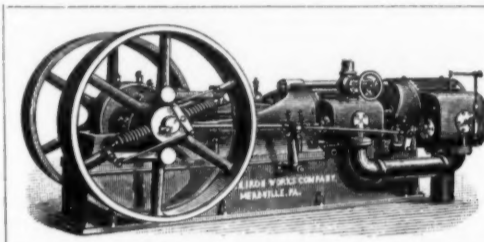
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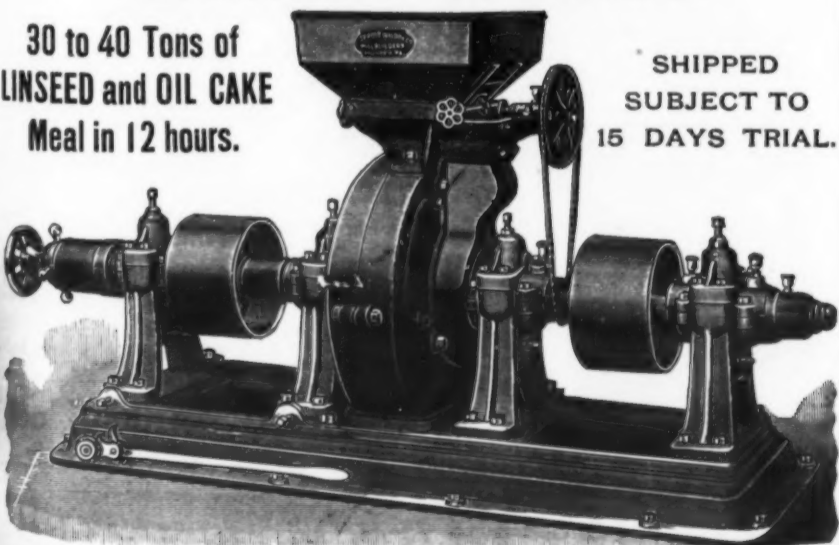
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Meal in 12 hours.

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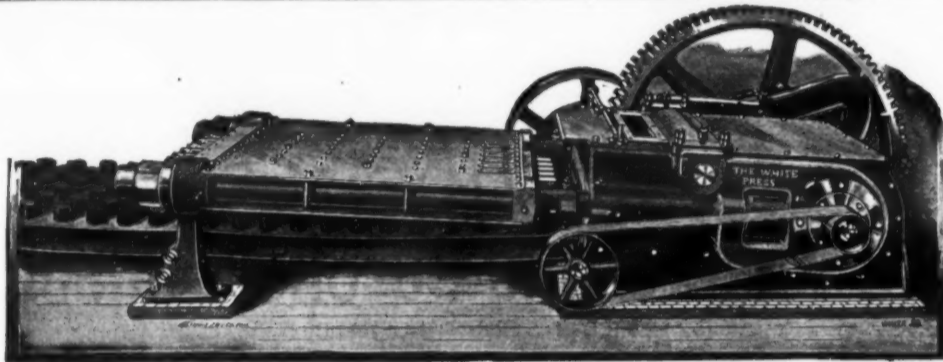
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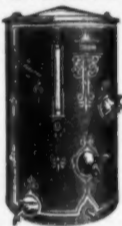
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STEAM PIPES, BOILERS, &c. &c. THE PERFECT NON-HEAT-CONDUCTORS.

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Best Anti-Friction Metal for all Machinery Bearings. For Sale by all Dealers.

Beware of Imitations.

Genuine MAGNOLIA METAL is made up in bars, of which this is a fac-simile.

The name and trademark appear on each box and bar, and besides this the words "Manufactured in United States" and "Patented June 3, 1890" are stamped on the under side of each bar.

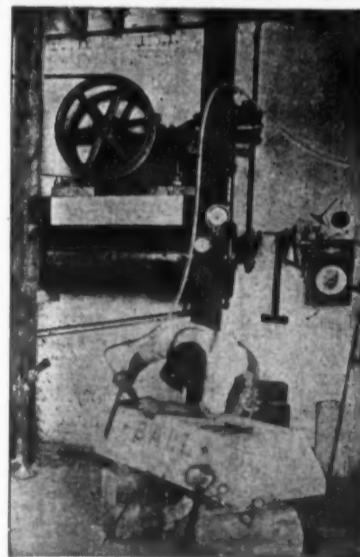
MAGNOLIA METAL CO. (Owners and Sole Manufacturers.) 266 & 267 West St., New York.

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We call to mind the successful operation of various applications of Compressed Air.

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PITTSBURG METER COMPANY, EAST PITTSBURG, PA.

MANUFACTURERS' RECORD.

A WEEKLY SOUTHERN INDUSTRIAL, RAILROAD AND FINANCIAL NEWSPAPER.

VOL. XXXVI. No. 7. {
WEEKLY.

BALTIMORE, SEPTEMBER 8, 1899.

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SINGLE COPIES, 10 CENTS.

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RICHARD H. EDMONDS, President.
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BALTIMORE, SEPTEMBER 8, 1899.

In a letter to the Manufacturers' Record Mr. L. W. Hammond, secretary and treasurer of the Peck-Hammond Co., heating, ventilating and sanitary engineers, says:

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"The Twentieth Century State Edition of the News and Observer" of Raleigh, N. C., is one of the most ambitious and enterprising issues ever made by a Southern newspaper. The News and Observer has during the past few years published five special editions which attracted wide attention, but its latest effort on that line eclipses all the others. It is in reality a bound volume of 228 pages, with a handsome lithographed cover, and with illustrations of leading citizens and prominent buildings not only of Raleigh, but of many other progressive communities of North Carolina, the resources and achievements, each of which are treated at length in the edition. The publication is a credit to American journalism and is a splendid index to the commercial and industrial advance of North Carolina.

In Optimistic Strain.

With the close of the cotton year leading newspapers of the South are publishing reviews on the growth of their respective cities, and of the regions tributary to them. From Galveston to Newport News and from Charleston to St. Louis the record of healthy growth is almost unbroken. The evidences of progress include increases in bank clearings, in expansion of building operations exerted either in the erection of new structures or the enlargement of old ones, in municipal improvements and additions to transportation facilities. All through the special issues of such papers as the Galveston News, the New Orleans Times-Democrat, the New Orleans Daily States, the New Orleans Picayune, the Mobile Register, the Montgomery Advertiser, Charleston News and Courier, the Raleigh News and Observer, and the reviews which have appeared during the past two weeks in the Birmingham News, the Birmingham Age-Herald, the Augusta Chronicle and other papers, is an air of gratifying business activity. This

is manifest also in the announcements of many other Southern newspapers of the inception of new enterprises and the enlargement of operations of old ones, the better opportunities for employment of a larger number of persons than ever before, and the scarcity of labor in several communities. Regarded as a whole, the Southern press at this moment has a tone more optimistic than has been noted for several years. The beauty and strength of the situation are found in the fact that the tone has a most substantial basis.

The Cotton Year.

At the annual meeting of the shareholders of the Eagle and Phenix Mills of Columbus, Ga., it was decided to add \$150,000 to the present capital, \$600,000, of the company. The full \$150,000 have been taken, and applications for \$150,000 additional were made. This showing of great strength by the company is the more significant, inasmuch as, with one exception, the subscriptions were from the South. The history of the Eagle and Phenix Mills during the past year is a marked illustration of the progress made generally by the industry set forth statistically on another page of the Manufacturers' Record this week in the exceedingly valuable report of Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange. It is to be regretted that the large crop, 11,274,840 bales, brought in the market something less than the crop of 1893-94, which was 3,725,023 bales smaller. For this fact the planters were to some extent responsible, although they were beset by weather unfavorable for high-grade cotton. The farmers are apparently beginning to take to heart practically the lessons of the past few years and to enter upon a plan which will render them more independent of the cotton market. In the meantime the report shows that while all sections of the country have felt the revival in the textile industry, the South has fared better proportionately, and that its steady advance in mill building, almost unbroken during the past ten years and longer, continues. This is indicated by the following comparison of the number of bales taken by Northern and Southern mills, respectively, since 1890:

Year ended Aug. 31.	By Southern Mills.	By Northern Mills.
1890.....	546,894	1,793,258
1891.....	604,661	2,027,362
1892.....	686,080	2,190,766
1893.....	743,848	1,687,286
1894.....	718,515	1,601,173
1895.....	862,838	2,083,839
1896.....	904,701	1,600,271
1897.....	1,042,671	1,804,680
1898.....	1,231,841	2,211,740
1899.....	1,399,399	2,190,095

Study of these figures shows that in ten years the takings by Southern mills have increased nearly 156 per cent., while those of Northern mills have increased only a little more than 21 per cent. The increase in takings in the whole country from 1898 to 1899 was slightly more than 4 per cent. Of those takings nearly 39 per cent. went to Southern mills, whose takings in the

twelve months increased 167,558 bales, or more than 13 per cent., while those of Northern mills decreased 21,645 bales, or nearly 1 per cent. This increase in the South has come from the erection of additional mills and from enlargement of the capacity of old ones, the tendency being toward an increase of the average number of spindles per mill. As Colonel Hester says:

The activity within the past year in building new mills in the cotton States is without parallel. More than 300,000 spindles have been added to the mills in operation, and there are now being erected in old and new concerns nearly 825,000 spindles. In addition to this, there are projected in every Southern State cotton manufactories covering many thousands of spindles. Margins that make the Eastern spinner barely whole afford a fair profit in the South, and as long as this is the case the tide of cotton manufacturing will continue to rapidly increase in the cotton States. Trade conditions born of the unexampled prosperity of the country as a whole aided materially in relieving Northern spinners from their depression; the underlying conditions, however, have not changed, and the tendency to an eventual transfer South of most of the cotton industry is today stronger than ever.

An Iron Prophecy.

In the Manufacturers' Record of September 27, 1890, a treatise of "The Future Situs of the Principal Iron Production of the World," by Mr. Edward Atkinson of Boston, was printed. In that review the author stated that in the year 1900 the iron furnaces and steel works of the world would be found incapable of supplying the then existing demand. That time, he believes, has arrived a year earlier. In this issue we publish a lengthy paper from him reviewing his former treatise, and in sending this Mr. Atkinson writes:

It now seems to me fit to review that prophecy and to point out certain facts which may be the symbol of opinions in which some of your readers will not concur, but which yet should be soberly considered. We have but thrust into warfare in the East, which is now being conducted under such conditions that the normal rate of taxation of \$5 per head, which sufficed for the period of twenty years of peace, order and industry from 1878 to 1897, has become \$9 per head during the last year, and promises to continue at the rate of \$10 per head unless this war is stopped. Whatever the judgment may be upon the war itself, such is the fact.

To my mind there are few compensations for these conditions. One of them is a lesson in taxation. The direct taxes now being imposed upon the people of this country, which have been rendered necessary for revenue in the conduct of this war, would now be sufficient for the conduct of the government in time of peace without any complex system of collecting revenue under the most complex tariff of duties ever existing in any land. I merely speak of these facts as an introduction to the yet greater fact to which the main part of this paper is devoted.

Whatever opinion may be had about Mr. Atkinson as an agitator against what he regards as imperialism, nobody can dispute the fact that he has been remarkably successful in aiding in attracting attention to the South's resources, despite his position on Southern cotton manufacturing. His forecast on the world's iron trade of

nine years ago has worked out in such a remarkable manner that his paper dealing on the present outlook will attract more than usually wide attention; but, recognizing the importance of his facts on iron interests, the Manufacturers' Record takes issue with him on his conclusions on expansion.

Birmingham a Model.

In preparation for a pamphlet to be issued by the Birmingham Commercial Club, Secretary J. B. Gibson is compiling valuable statistics illustrating the growth of the Birmingham district. The figures cover the period since 1870. They show that in that time in Jefferson county the length of the railroads has increased from nothing to 482.25 miles, with an assessed valuation of \$5,501,296, while their length in the State has increased from 1157.6 miles, valued at \$15,314,536, to 4127.32 miles, valued at \$45,621,947; that receipts for general license taxes have increased in the county from \$21,718, or 1.9 per cent. of the total in the State, to \$204,527, or 14.3 per cent. of the total. Birmingham has now within its corporate limits three national banks with a total capital of \$650,000, six State banks with a capital of \$940,000, making a total banking capital of \$1,590,000; surplus and undivided profits, \$203,500; deposits, \$5,917,500; loans and discounts, \$4,053,400. The deposits have increased during the last six months by nearly \$1,000,000, and during the past eighteen months by nearly \$2,900,000.

These figures, taken in connection with the fact that Birmingham's industrial expansion during the year ended July 1 included new industries put into operation or in course of construction representing \$3,600,000, improvements being made by concerns already established representing \$935,000, and new houses completed or in course of construction \$447,900, illustrate in striking manner the results of the interdependence of railroad construction, exploitation of industrial resources and expansion of a progressive, wide-awake community in the South. Thirty years ago Birmingham was not upon the map of the United States. The germs of its life were there, but they needed the fertilization of the railroad and of manufacturing capital, backed by energy and faith in the future. The combination has been effected, and the manifestations of the past few months indicate that the dreams of Birmingham pioneers have become realities to the profit of men who have shared in the actual work of development, and of communities similarly equipped which may follow Birmingham's example.

The Huntsville Convention.

The enterprising men of Huntsville, who have so vigorously seconded the efforts of the Chamber of Commerce in behalf of the industrial convention to be held there next month, are to be congratulated upon the success that seems already to be assured to the gathering. Its programme is of a de-

cidedly practical character, although it does not contemplate any action save increasing interest in Southern development. That is one of the strong points of the convention. We have had so many conventions in the South proposing without representative preparation to accomplish a definite purpose, and, of course, resulting in nothing but resolutions of a scattering character and a self-exploitation by politicians, who, if they are permitted to do so, will use any gathering from a funeral to a camp-meeting to cultivate votes, that the prospect of one devoted exclusively to the material welfare of the South is refreshing.

The Huntsville convention apparently does not propose impracticable schemes for solving the cotton problem, for enlarging industrial operations or for extending Southern commerce. The character of the topics to be discussed, however, is a promise that a great impetus will be given to a cultivation of that kind of public spirit which is necessary to insure the healthy, well-balanced growth of all our Southern interests. It will be an educational convention, and we hope and believe will be effective for good. Certainly it will add another feather to the cap of Huntsville, already enjoying the benefits of an intelligent direction of public spirit.

Advice to the Point.

The proceedings of the convention of the Southern Industrial League, held in July at Atlanta, have been published in pamphlet form. In issuing the pamphlet the executive committee of the league re-enforces its practical value by the following words addressed to the members:

If you are a manufacturer, remember that the home market is the best market. It may just now be the most difficult to handle, because our people have become used to purchasing elsewhere. But our best prosperity will come when Southern manufacturers supply the needs of the Southern dealers. Possibly you are not making what the local dealer demands. Why not make it for him? Study local needs and try to supply them. Build up the home market; it is the most profitable market in the world. If you are a merchant, these proceedings must lead you to the conclusion that permanent prosperity in the South will follow certain definite conditions. We can prosper commercially only with better credits, lower interest and the upbuilding of industrial enterprises. All of these can be facilitated by a diversified agriculture. The man who gets nearer to the farmer—the man whom he seeks and takes advice—is the merchant with whom he deals. We believe that you can become an active factor in this great work. You can do this in many ways, but certainly you can accomplish a great deal if you will give your customer practical advice. Make it a stipulation of credit that half of the land in cultivation shall go in other than cotton, and then arrange to furnish him a market for these diversified products. Help him in every way you can to break away from the single-crop system.

The advice in the concluding sentences cannot be given too often or followed too closely.

Ex-Governor W. C. Renfrew has, by securing the Central Valley Company's lease on 200 acres of mineral land containing five big producing mines, and the fee in eighty acres adjoining, increased the investments by the American Zinc, Lead & Smelting Co. in Missouri zinc properties within the last three months to \$1,300,000.

The Trinity River Land & Irrigation Co. will begin next week the construction of a canal eighteen miles long and 125 feet wide from Turtle bayou, near Wallisville, Chambers county, Texas, to Winnie, on the Gulf & Interstate Railroad.

THE DOMINANT FACTOR IN COMMERCE.

By Edward Atkinson.

When the nation recovers its mental balance and insists upon a return to normal conditions of peace, order, industry and commerce, one of the compensations for this era of violence and wrong may become plain. The necessity for a resort to taxes for revenue only already proves that the \$5 per head needed for the conduct of the government, when economically administered, may be raised from liquors, tobacco, mineral oils, stamps and other internal taxes, with duties upon a very few articles of voluntary use or luxuries. A simple system may then be adopted under which all taxes that the people pay the government shall receive, while no public money shall be diverted by subsidies or bounties, direct or indirect, to sustain private interest or augment private fortunes. Exports to the Latin-American, Asiatic and African continents may then be rapidly increased by removing the fines or duties now imposed upon crude or partly-manufactured articles which are used in our higher types of work and which are the only means of payment with which the non-machine-using States can liquidate their purchases. In this way only can we increase their power of purchase and they increase our exports to them.

When these facts are developed the other greater fact will become plain, namely, that the paramount control and dominant position in iron, copper, lead, steel and zinc has passed from Europe to this country. It was the dominant position in the production of iron that gave to Great Britain the first place and control in the commerce of the world in the first part of the last century. It was the invention of the Bessemer process of making steel that gave to us the power to become the chief source of the world's supply of grain. It was the Gilchrist-Thomas invention of making mild steel from the phosphoric ores of iron, previously worthless, that gave the great impetus to the industry of Germany only a few years since and which has enabled her to compete with her exports in international commerce.

In 1890 the writer ventured upon a forecast of the conditions which have now been attained by us in becoming the dominant force in iron. Even before the discovery of the Bessemer ores of Lake Superior the following prediction was made and published in the Baltimore Manufacturers' Record, based upon the deposits of iron ores and coal in the South as yet but in the beginning of their development. It then seemed probable that the South would become the chief source of all types of iron derived largely from what Sir Lothian Bell had named the imperial deposits of the ores of the world in and around Alabama. In attempting to fix the future center of gravity of the iron production of the world I placed it in Western North Carolina rather than in Pittsburg. Soon, however, the developments of Bessemer ores of Lake Superior, carried at an excessively low cost to the lake ports and to Pittsburg, re-established the center of gravity of the iron and steel production, not only of this country, but of the world at Pittsburg, Pa. The existing condition and inadequacy of all the iron and steel furnaces of the world to meet the present demand was as plain in 1890 as it is now.

Mr. Abram S. Hewitt had made a forecast even as early as 1856, predicting substantially the existing conditions. This was unknown to me at the time of my own computations, but was incorporated later with them, fully sustaining my figures.

The summary of the consumption of iron from 1870 to 1889 had been as follows:

SUMMARY OF CONSUMPTION, 1870 AND 1889, INCLUSIVE.

In 1870 to 1878, inclusive, the average consumption of iron per capita by the people of the United States, as nearly as it can be computed, did not exceed 150 lbs. In 1879, taken separately, it may have been approximately 200 lbs. In 1889 it was in excess of 300 lbs. In 1889 the consumption or use of iron in Great Britain, France, Germany and Belgium, after making allowance for the relative import and export of each country, did not exceed per capita 175 lbs. If there were upon the globe, in 1889, about 1,200,000,000 people, aside from the population of the foregoing countries, then their average consumption of iron did not exceed per capita 11 to 12 lbs.

SUMMARY IN ROUND FIGURES AND GROSS TONS—1889.

	Population.	Lbs.	Tons.
United States..	64,000,000	300	8,500,000
Great Britain, France, Germany and Belgium	136,000,000	175	10,500,000
All the rest....	1,200,000,000	11	6,000,000
Total	1,400,000,000	40	25,000,000

Bearing in mind that the development of manufactures and the power of sharing in the great commerce of the world rest more upon the consumption of iron and steel than upon any other factor, these figures were significant. From them it was easy to make a forecast, which was stated in the following terms:

A summary of these conclusions will make the prospective demand of the world in the year 1900 stand as follows:

Present production.....	Tons.
Increased consumption in the United States..	7,000,000
Increased consumption in Great Britain, France, Germany and Belgium	2,000,000
Increased consumption in all the rest of the world	6,000,000
Total increase of demand....	15,000,000
Total supply required.....	40,000,000

Mr. Hewitt, in his forecast of 1856, had predicted a product of 48,000,000 tons in the year 1915, now seen to be far less than the probable figures of that date, because the use of iron and steel may be said to breed a continuous and accelerating demand far greater than the increase of population. Coupled with these figures I put the following questions:

"Can this sequence be continued? Are not the present conditions wholly at variance with the past? Is not the cost of production now rising in Europe? Is it not rapidly declining in this country? May we not add two tons to our product for every one added elsewhere, or even more? Must not the United States soon begin to supply in part the iron which will be needed even in Europe?"

	Increase.
In 1856 the product of the United States in net tons was	883,137
In 1867 the product of the United States in net tons was	1,461,626 65%
In 1878 the product of the United States in net tons was	2,577,361 76%
In 1889 the product of the United States in net tons was	8,516,068 238%

"If the increased consumption in the United States shall be less, will not the demand of the rest of the world, under the new conditions of expanding commerce, be vastly more than I have ventured to compute in the foregoing table? As I have before suggested—

"Suppose China begins to develop the Chinese Empire by the construction of railways?"

"Suppose the Trans-Siberian Railway to be put under contract by Russia?"

"Suppose Western Asia and Southeastern Europe should be developed, and the Euphrates were to be paralleled by a railway with numerous branches?"

"I may not venture to say in this treatise that the supremacy in this branch of

industry has passed away from Great Britain, but the increasing scarcity of her fine ores, the increasing depth of her coal mines, the great heat and difficulty in working them, the near exhaustion and consequent high price of coking coal, and the change in the conditions of the workmen in Great Britain, may sustain such a conclusion.

"The question is not, however, whether the United States will take away any part of the present iron production from Great Britain. The true question is, can the iron-producing countries combined readily meet the prospective increase of demand?"

"When the disparity due to taxation is removed, and the price of iron is as high in Great Britain as in the United States, the supremacy in the consumption or conversion of iron into steamships, railway cars, heavy machinery, tools and the like may be finally established in the United States. When established within our limits, then the supremacy in the production of the iron itself must go to the point where the facilities for working the mines and the cost of assembling the materials at the furnace are least, because at that point the highest wages can be paid for skilled workmen, accompanied by the lowest cost of production, which will be due to such favorable conditions."

Later, in the treatise of 1890, the writer stated that in the year 1900 the iron and steel works of the world would have become incapable of supplying the existing demand. That time has already come. In the conclusion of this forecast of 1890 the writer added words which are now very significant:

"Finally, it may be remarked that it is not only a matter of the utmost personal interest, but perhaps the duty of every man who has attained a little public influence to use it in such a way as to hasten the time when the English-speaking people of every land and of every clime may be united in one great 'Zollverein' or treaty for the free exchange of their services, so as to increase their power to the utmost. They may then dominate the world in the pursuits of peace and plenty, and may compel other States and nations to disarm which are still bound to the misconception which belonged to the childhood of nations, that commerce is itself a state of war, and that it promotes antagonism. This medieval theory of trade is still a mark of the mediocrity of intelligence and lack of true political education which is displayed by legislators, who even now propose to regulate general prices and 'to raise the rate of wages' by act of Congress—a proposition actually made by a senator in a debate but a few weeks since!

"Under such a treaty of mutual service the control of the commerce of the world would be so complete on the part of the English-speaking people that other nations would be incapable of bearing the load of their great armies, and would be compelled to disband them and to permit their navies to rust away in order that they might live. The antagonism of European nations is now maintained only to keep up the barriers to commerce, at which the taxes, amounting to over \$600,000,000 a year, collected from the scanty earnings of the people, yet come to less than the cost of maintaining the armies and navies which, except for those barriers, would not be required. Such are the systems behind which bureaucratic, dynastic and autocratic power is maintained at the cost of the oppressed.

"Nothing could be more conducive to this result than the general conviction to which the representatives of the iron and steel interests of this country are rapidly coming, that their work is one of necessity and not of choice, and that it no longer requires, if it ever did, the artificial stim-

which has been given to it by means of duties upon the import of coal, ore and crude metal into this country.

"If all duties upon the imports of ore and coal were now removed, pending the development of the new sources of supply, a great many existing iron furnaces and iron works or machine shops would be saved which are now being stopped and dismantled, especially heavy iron works in New England. Time would be given for the increased demand which will soon require the entire product, not only of the United States, but of the North American continent and Cuba, to be met in a safe and suitable manner, even if it increases from 10,000,000 to 30,000,000 tons or more before the next century.

"If the forecast presented in this paper is a true one, every existing plant will be called into requisition in the near future that has even the shadow of a right to exist. It is probable that the iron mines of the United States cannot be developed with sufficient rapidity to meet this demand, but that the iron furnaces, works, mills and machine shops on the eastern coast must be sustained by temporary, if not permanent, supplies of ore and coal from Canada and from Cuba."

At this date, September 1, 1899, these conditions have been attained.

It is not only the dominant place in the iron and steel production of the world which may hereafter give to the United States the paramount control of international commerce, but other factors. The main competition in supplying the world with useful goods exists between us and the manufacturing States of Europe, namely, Great Britain, Germany, including Belgium, Holland and Luxembourg, and France, which are also our principal customers for food and fibers. The competition of all other countries is a negligible quantity except in a few specialties of no importance. The population of these States is now about 146,000,000.

To each of them an export and import traffic is necessary either to their very existence or to the present distribution of their labor and capital, with the possible exception of France, because each is dependent upon others, mainly upon us, either for food, fibers, timber or metals. Without the import of the crude or partly-manufactured materials necessary to the support of their manufactures largely the present methods of supporting their present population, except France, might be imperiled. On the other hand, the exports of the United States consist of their surplus product of food, fibers, timber, metals, and now even of manufactures. We need markets for an excess which we may exchange for comforts and luxuries, but in least measure for the necessities of life.

True, we import some wool, hemp, a small quantity of long-stapled cotton and some of the hard tropical kinds of timber, but we import these articles from choice rather than from necessity, as well as our tea, coffee and sugar, because, as Daniel Webster once said, "we cannot afford to devote our high-priced intelligent labor to work that foreign pauper laborers can do so well for us."

For instance, tea can be grown and prepared in some of the Southern States, but the picking and preparation of the tea leaf is a laborious process of hand work. The Chinese are a cotton-clad people; in the northern sections heavily clad, mostly hand-spun and hand-woven fabrics. The cotton fabrics exported from England and the United States combined would suffice to clothe only 10 to 15 per cent. of the population, or 40,000,000 to 60,000,000 out of a computed population of 400,000,000 or more. The fabrics which the Chinese consume are heavy cotton drills and sheeting and medium

shirtings, which are the fabrics on which Southern cotton factories may most surely succeed. The work of one weaver in a Southern cotton factory at wages of a dollar a day will exchange for ten days' work of a Chinese hand worker in the tea product at ten cents a day. What a foolish business it would be to put any obstruction in the way of an exchange of one day's work on Southern cotton fabrics for ten days' work on Chinese, Indian or Ceylon tea, or for anything else the Chinaman can spare in exchange, in the effort to make tea a domestic product. Again, the people of Australia are relatively among our best customers for our manufactures of the highest types which yield the highest rates of wages at the lowest labor cost. We now buy wool from them in exchange, which is also produced at high rates of wages, yet at low cost on the great plains, which are subject to devastating drought, making the work precarious and uncertain. But this wool is the only necessary fiber of which we get a part from foreign countries by our own fault.

Whenever the yellow cur dog of the Southern States, which now governs many of them, is muzzled or suppressed, we may supply ourselves with every variety of wool needed except the semi-barbarous carpet wools of South America and Asia. Whenever the cotton-growers protect themselves or are protected from the cur dogs, sheep may be fed on every upland cotton field, keeping down the weeds, consuming the nutritious refuse of the cotton plant, fertilizing the soil, doubling the crop of cotton on every acre and adding the wool clip and the mutton to the income of the farmers. Not only may the cotton fields supply the world's demand for clothing wools, but on the mountains and in the high valleys south of the Potomac may every strain of long and lustrous wool be produced that is needed in our woolen and worsted industry. Yet the wool-growers of this country, led by the breeders of high-priced merino rams of Ohio, have long practiced consistently with the precept laid down in an old school composition written at the Exeter Academy upon self-dependence. "Self-dependence," said the boy, "is that quality of the human mind which leads us to get some one else to do what we ought to do for ourselves."

The fines or duties upon Australian wool in the McKinley and Dingley tariffs are excellent examples of the application of that kind of self-dependence.

Under these potential conditions we may therefore make a forecast of the future commerce of this country.

The United States produce an excess of coal, iron, steel, copper, lead, zinc, silver, grain, meat and provisions of nearly every kind; of cotton, timber, mineral oils; they are deficient only in tin, and for a time in wool, in potash and a few other useful articles. Their national taxes have been only one-half the rate of the lowest tax of either of their European competitors, and they have been free of the blood and labor tax of great standing armies, and may soon be restored to that ratio.

Great Britain, deficient in food, fibers and the ores of iron, burdened with imperial taxes which have long been more than double our own, and compelled in self-defence to maintain great armaments, must yield precedence to us in commerce when the craze of criminal aggression has passed by.

Germany, poor in soil over the larger portion of her area, often deficient in food, always deficient in fibers and in all metals save iron; subject to imperial rule, to huge armaments and to taxes which have been double our own, can only compete with us by the better technical edu-

cation of her mechanics and her merchants, very soon to be rivalled or excelled by us.

France, abundantly supplied with food, but deficient in metals, timber and fibers, may remain a self-supporting State with her stationary population, but can only compete with us in commerce by the excellence of her mechanics and by excelling us in the arts of design upon which so large a portion of her exports depend.

None others have we to fear, but all others may perhaps deprive themselves even of their present share in our abundance by attempting to stop the supply of our goods by high tariff taxes. The only effect of that policy will be to increase the cost of their own manufactures, which they might otherwise export in competition with us, and thus to give

us the more complete mastery of the commerce of the world.

The colonial system has failed. Great Britain lost her American colonies in her effort to sustain it. Her present aggressive policy of expansion is increasing her taxes and straining even her power of endurance. Spain has lost her colonies by misgovernment. France is trying to escape from the burden of taxes generated by her effort to colonize the East. Italy has given up the effort. Germany may try the experiment in militarism, but the specter of socialism already curbs even her self-willed emperor. Will the people of the United States enter upon the career of imperialism in the face of these examples of folly and failure? Surely not.

Boston, September 1, 1899.

BRITISH IRON AND STEEL INSTITUTE.

Delegates Studying the Trade Situation and American Possibilities.

[Staff Correspondence Manufacturers' Record.]

London, England, August 21.

The Iron and Steel Institute meeting at Manchester, just closed, was attended by the principal metal-makers of the United Kingdom. A subject discussed very seriously outside of the convention hall and not down on the programme for an essay was the prospects of the iron trade and the outlook for the steel-rail market abroad. Many of the delegates saw the big site on which the Westinghouse Company will have its great electrical works in Manchester suburbs, and possibly this set them to thinking of what Americans are doing in the foreign market in other ways.

In a former letter I referred to the deterioration in the quality of the Spanish ore, on which many large ironmasters depend to mix with the British material. I find that several of the largest companies have been utilizing Spanish ore almost exclusively, and they are seriously concerned. The deposits in Northern Europe were also alluded to, but, judging from the discussion at the Manchester meeting, the metal-workers doubt if any considerable increase in the supply will be noted for two or three years, owing to the lack of railroad facilities at present to the nearest harbor. The question of securing a harbor nearer the mines that is not icebound most of the year is very doubtful.

Consequently it is calculated that the cost of ore for mixing is liable to increase, but American furnace companies must not be too sanguine of securing a permanent market for pig iron over here. As I have already noted, it is a British trade principle handed down for years to fix a certain selling price. If the customer does not want to pay it he goes without it, whether he wants a large quantity or a small one. The rule has been "take it or leave it." The custom of making a considerable reduction in order to sell a larger amount is almost unknown, and this applies to the metal business as well. From what I can gather, the larger furnace companies make a present profit around 33 1/3 per cent., basing prices in the Middlesboro district, for instance, £3 10s. per ton, the latest quotation. This is an increase in one year for No. 3 grade of £1 9s., but in the same time coke has risen 10s. per ton and ore about 6s. for the hematite. This considerably shaves down the profit, while the wages in this district have also been increased by some of the principal companies from 5 to 7 1/2 per cent. There is no doubt that when the dull season arrives and the demand for home consumption, now so unusually ex-

tensive, ceases, the ironmasters can sell at the prices ruling a year ago and then have a margin of profit of at least 10 per cent., with the raw materials at their present quotations and labor at the same figure. The price in American money would rule in the neighborhood of \$8, and Americans must figure on competing with this quotation and calculating transportation besides, for this quotation means delivery in the States with a very small freight charge added.

But for the present there is plenty of room for English and American producers, for the former cannot fill the demand here, saying nothing of foreign contracts.

As to steel rails, I have received some figures from excellent authority on the present cost, also in the Middlesboro district. The firms which must buy all their raw material, such as pig iron and fuel, are seriously handicapped by the high price, except where they have made contracts at prices prevailing last year for regular delivery. Those who are obliged to pay present figures are turning out rails at a cost of £4 10s. for iron, 6s. for fuel and £1 15s. for labor to every ton of rails. It is estimated that nearly one and one-quarter tons of iron are required to produce this quantity, allowing for scrap, etc. This is a total of about \$33 per ton, compared with the latest selling price of about \$37.70 per ton. Over one-half of the rail-makers produce their own pig iron, and in manufacturing rails do not have to pay what might be called the iron-makers' profit. Still they could sell their iron in the market at the price the other rail-makers pay; so it is a question, after all, if this difference should not be considered a loss to them.

These figures emphasize the statement of an authority quoted in a former letter, that the outlook for American steel rails is excellent in this as well as other markets.

The recent award of a contract aggregating nearly \$600,000 to the E. P. Allis Co. by the Glasgow corporation is another illustration of American push, although I am forced to admit that the British stubbornness about small profits may have had something to do with it. Some of the American machinery men here say it was a case of profit-shaving, but they were representatives of other houses, and their statements must be taken with some "salt." Anyway, the city of Glasgow is to have a model power plant, and American throughout. I might say here that the Westinghouse Company to build the Manchester plant

will be capitalized at \$7,500,000, according to the papers just filed for record.

D. ALLEN WILLEY.

TWO ADVANCES IN PRICE.

Renewed Life in the Birmingham Iron Market.

[Special Cor. Manufacturers' Record.]

Birmingham, Ala., September 5.

The iron market took on a renewed life the past week under the influence of an acute demand, and there was no difficulty in advancing quotations twice during the week. It is true both advances were only twenty-five cents each, but each seemed only to whet the appetite of buyers, and there was a rush to get in before iron went out of sight. The competition of buyers made sales easy to conclude. There was more or less variation in prices again, depending on grades and delivery desired. Some grades for first half of 1900 delivery are hard to obtain, even at a premium bid. To illustrate, there was a sale of No. 1 foundry at \$17.75 and of No. 2 foundry at \$16.75, both for delivery first half of 1900, while an order for 2000 tons, based on \$17 for No. 2 foundry, delivery December, January, February, was refused. This is confirmatory of the statement about the difficulty of obtaining certain grades and desirable delivery. Quotations now are for No. 1 foundry, \$17.50; No. 2 foundry, \$16.25 to \$16.50; No. 3 foundry, \$15.50; No. 4 foundry, \$15; gray forge, \$14.75 to \$15. Basic iron is around the price of No. 2 foundry, with a demand that it is impossible for the present limited capacity to satisfy. The present capacity is fully engaged for more than a year ahead. As to the volume of business, it has been more than some sellers desired. The opinion grows stronger that there is nothing to prevent No. 2 foundry selling at \$20. The sales during August of the leading interest here foot up 150,000 tons. As their current output is about 65,000 tons now, their August sales foot up about two and one-half months' output. Other interests have probably not been as free sellers, but they have registered all the orders they desired. The sales have been pretty widely distributed. The demand has been a general one. Indications are strong that a further advance will be scored before this is printed.

The export business is purely nominal. Contracting agents for ocean rates are doing all they can to put some life into it by offering a low tariff. The open rate to Liverpool is now \$3 per ton, and if one had a good lot to fill in there is probability that even this low rate could be shaded. But all the iron for foreign markets has been provided for and fresh business is tabooed, as there is now no margin of profit for us in competition with British markets. But some iron is due them on orders taken in the past, and some iron will be going across the ocean, but not at prevailing prices.

The process of repairing the Philadelphia furnace at Florence and the Hattie Ensley at Sheffield has commenced, and the Sloss Company anticipates that one will be in blast by November and both before January. It is repeated here with emphasis that there will be no appreciable increase in the output of iron in this and adjoining districts before the year 1900. The warrant yards are now without interest. The stock has increased probably 1000 tons. Reliable information has been received that the contract for the erection of the new cast-iron pipe works at Bessemer has been concluded with Wellman & Co. of Cleveland, Ohio, and that work will be commenced at an early date. There are other enterprises considering Bessemer as a location, and a

helping hand is offered anything applying that has any merit.

There has been some movement in ore lands, and H. F. De Bardeleben has the credit of leading the buying. He has picked up 4000 acres near Piedmont (east of us) and 4000 acres in the neighborhood of Cedartown. As our red ore becomes harder as we go down, the propriety of having the brown ore to mix with it as a softener becomes more and more apparent. The brown-ore lands accessibly located are therefore in demand. While the usual price varies from \$5 to \$20, a recent sale of an exceptional tract was at \$136 per acre, and another at \$116 per acre. There is lots of verification of statements going on, and much dickering concerning ore and coal properties, and we may expect in October lively times in these matters.

The coal situation is growing in interest. The Pratt mines yielded in August approximately 200,000 tons, and the total mined by the Tennessee Coal, Iron & Railroad Co. was 385,000 tons. This coal goes everywhere. So great has been the demand for cars that the railroads have been unable to divert any to use in filling their bins for winter use, as is usual. Their wants during winter being unprovided for will add to the seriousness of the situation later on, and the warning is now sounded to buyers of coal from this district, anticipate your wants and have your orders filled without delay.

J. M. K.

Eastern Iron Markets.

[Special Cor. Manufacturers' Record.]

Philadelphia, Pa., September 6.

Iron and steel have again advanced in price, not so much because of demand as to the fact that capacity is so far sold up. About the only business being done now is on account of 1900. There is naturally more or less unwillingness to sell beyond June, 1900. Everything points to higher prices. Demand is gaining on supply. September opens with grand prospects. A host of new enterprises are coming up, all calling for iron and steel. Among these are trolley roads. The mills supplying equipment are now far oversold. Demand for 1900 in this line will be phenomenal, to say nothing of requirements for standard-gauge roads.

Mills have a year's work either secured or in sight. Many are sold no farther ahead, but they could be. Furnaces are choked with orders, and today's outside quotations are \$24 for No. 1 X foundry, \$23 for No. 2 X, \$21.50 for plain and \$20 for gray forge. Billets are \$40 nominally, and none to get. Bar iron is 2 to 2.10 for refined and 2.20 for special steel bars. Angles are 2½ and beams and channels 2¾, outside price. There is nothing that can arrest the upward tendency in iron and steel with such expanding requirements ahead of us. Locomotive and ship builders, car-builders and machinery-makers are all crying for more material. One week is like another in this respect. Much as some consumers have bought ahead, they all want something more.

It is impossible to forecast the market. There is nothing certain except big business. Consumers are becoming alarmed at the course of prices. No. 1 X foundry will soon touch \$25. Truly the iron trade has been taken by surprise. The expansion of capacity now going on will gallop ahead until the corner is turned. Never was there such a development. The trusts are making new conditions. They are not to have everything their own way. Within a year iron-making capacity outside of the trusts will be quite a factor unless, perchance, the newcomers are gobbled up as soon as hatched. We are now into the fall trade, and there is enough business for all and lots to spare.

The demand for textile equipment is greater than ever known, and big shipments are being made.

SOUTHERN ELECTRIC PLANTS.

Activity in Improving Them in Connection with Water-Power Development.

In a letter to the Manufacturers' Record on the outlook for American industries Mr. Thorburn Reid, consulting electrical engineer of New York city, writes:

"There is at present considerable activity throughout the South, as well as in other parts of the country, in the direction of improving and extending electrical plants, and in the development of water-powers.

"In the case of electric railways and electric-light and power plants this takes the form of consolidations of existing interests and extensions and improvements of existing plants, rather than the building of new ones. A case in point is the consolidation of the railway and lighting interests in and about Norfolk, Va., from which will result large extensions of the railways and of the area served by the lighting plant, together with an almost complete remodeling of the power plant.

"Many of the railway, light and power plants throughout the South, by reason of poor design, old and inefficient apparatus or bad management, pay little or no profit to their owners, with the result that they can often be bought at a figure far below their intrinsic value under proper management. Capitalists both North and South have been quick to see the opportunity thus presented for securing a profitable investment, and they are buying up these properties at a low figure and remodeling the plants on modern lines with the help of the best engineering talent, so that the output is largely increased without a corresponding increase in operating expenses.

"I have come in contact with cases where plants which were barely able to pay expenses were so much improved as to pay a very good profit, not only on the original capital, but also on the extra investment required to carry out the improvements. The Southern business man must learn, however, that such results cannot be obtained without the employment of the very best engineering and administrative talent.

"New water-powers, on the other hand, are being developed all over the South, the power thus developed being used mainly for driving cotton mills. The advantages offered by long-distance transmission, however, do not seem to have received the attention they deserve. Power can be transmitted electrically over distances up to fifteen or twenty miles with ease and certainty, and at those distances, when conditions are favorable, can be delivered to the consumer at a cost considerably less than that obtained from coal. In some parts of the West, where the cost of coal or other fuel is high, power is transmitted to very great distances, in one case as far as eighty miles, but throughout most of the South, where coal is comparatively cheap, twenty miles would seem to be about the limit at which water-power could compete with steam, unless the conditions were especially favorable. There are many undeveloped water-powers throughout the South whose distance from cities using steam-power is well within this limit. I have usually found, however, when these powers have been brought to my attention, that the greatest obstacle in the way of obtaining capital to develop them lies in the hazy ideas of the promoters or owners as to how much power they have, what the development will cost, what is the

probable demand for power; in fact, all the many things the capitalist wants to know before he will give the matter any attention.

"Here again is seen the value of the best engineering talent, in that such an engineer, knowing just what information the capitalist requires, and how best to get it, can draw up a report that will attract his attention and in which he will have confidence by reason of the engineer's reputation for care and thoroughness. The promoters of the scheme are thus prevented from expending time and money on enterprises which could not be made to pay a profit on the investment.

"Capital is ever seeking investment, and any enterprise which can show a reasonably safe return on the money invested can secure all the capital it needs, provided the plan is properly presented and to the right people; but no capitalist has the time nor can afford to examine into the many half-baked, ill-digested propositions brought to him.

"There are many progressive and energetic business men throughout the South who have learned this lesson, and whose reports are models of their kind, but I regret to say that most of the reports lack many of the elements that are necessary if capital is to be interested. The promoters generally seem to think that when a survey has been made and the available power determined, often without reference to low water or floods, no further information will be required to obtain the necessary capital, whereas this is generally but a small part of what the capitalist must know before he will interest himself in the matter.

"The South has a great future before it in the direction of engineering and manufacture by reason of its natural and undeveloped resources, and of its cheap labor, but the preliminary work of ascertaining the value of these resources and of presenting the case in a clear, concise and comprehensive report should be done mainly by the Southerners themselves, for while this may entail a somewhat greater expense at the start, the advantages gained are worth many times the outlay required, for if the project is one that will not pay, this will be soon discovered, and further outlay, which would be money thrown away, would immediately cease. If, on the other hand, the enterprise promises to be a profitable one, the promoters can demand and obtain much better terms from the investors by reason of the confidence instilled by a careful and thorough report."

Activity in the South.

In a letter to the Manufacturers' Record Mr. L. W. Hammond, secretary and treasurer of the Peck-Hammond Company, Cincinnati, heating and ventilating engineers, writes: "While we have endeavored to accumulate a larger stock of material than usual, we find that the demand for our goods is so great that it keeps our stock in smaller proportions than we would wish. Our sales this year are largely ahead of last year, and with the bright outlook before us we expect to continue heavy sales. Judging from the reports received throughout the South, and from a recent trip made through that section, it would seem to us justifiable to expect continuous activity in business for the next twelve months at least. The mineral districts of Alabama, notably Birmingham, are experiencing the greatest prosperity that has ever been known. While we have had inquiries from as far as Siberia for our goods, yet we have not endeavored to push the sale of export goods, for we have about all we can do to take care of sales at home at present."

THE HUNTSVILLE CONVENTION.

Features of a Programme Decidedly Practical in Character.

The programme of the Southern Industrial Convention to be held at Huntsville, Ala., October 10, 11, 12, 13 and 14, indicates that the proceedings will cover in a most practical manner the principal aspects of industrial progress in the South.

Mr. T. W. Pratt, president of the Huntsville Chamber of Commerce, will call the convention to order, and addresses of welcome will be made by Mayor Allie Moore on behalf of the city, and by Governor Joseph F. Johnston on behalf of the State. The resources and industrial advantages of the several States will be set forth as follows: Alabama, by Governor Joseph F. Johnston; Arkansas, by Governor D. W. Jones; Florida, by Governor W. D. Bloxham; Georgia, by Governor A. D. Candler; Kentucky, by Governor W. O. Bradley; Louisiana, by Governor M. J. Foster; Missouri, by Governor L. P. Stephens; North Carolina, by Governor D. L. Russell; South Carolina, by Governor M. B. McSweeney; Tennessee, by Governor Benton McMillin; Virginia, by Governor J. H. Tyler; West Virginia, by Governor G. W. Atkinson.

Other special addresses will be as follows: "How the South Moves," Col. J. B. Killebrew, immigration agent Nashville, Chattanooga & St. Louis Railway, Nashville, Tenn.; "Why Cotton Mills Should Be Built in the South," H. H. Hargrove, Shreveport, La., Wm. A. Courtenay, Charleston, S. C., B. S. Walker, Monroe, Ga.; "The Iron Industries of the South," Nat. Baxter, president Tennessee Coal, Iron & Railroad Co.; "The Timber and Lumber Interests of the South," Erwin Craighead, Mobile, Ala.; "Immigration to the South," M. V. Richards, land and industrial agent Southern Railway, Washington, D. C.; "The Need of Industrial Education in the South," Hon. W. R. Glenn, Atlanta, Ga., Hon. Hoke Smith, Atlanta, Ga., Hon. V. W. Grubbs, Greenville, Texas; "The Railroads of the South and Their Relation to Its Development," Major J. W. Thomas, president Nashville, Chattanooga & St. Louis Railway, E. L. Russell, president Mobile & Ohio Railroad, Stuyvesant Fish, president Illinois Central Railroad; "Railroad Freight Rate in the South," J. E. Bierck, Gaffney, S. C.; "The Agriculture of the South and How It May Be Improved," Hon. Charles W. Dabney, Knoxville, Tenn.; "Flour and Flour Milling in the South," W. E. Damon, Nashville, Tenn.; "The Race Problem in the South," Booker T. Washington, Tuskegee, Ala., Hon. W. A. MacCorkle, Charleston, W. Va., Prof. W. H. Council, Normal, Ala.; "Legislation of the South as Affecting Capital and Corporations in the South," C. F. Hublein, Louisville, Ky., S. G. McLendon, Thomasville, Ga.; "The Relation of the South to the Industrial Wants of South American Countries," W. K. P. Wilson, Mobile, Ala.; "The Nicaragua Canal and Its Relations to the Industrial Progress of the South," Senator John T. Morgan of Alabama; "Commercial Organizations of the South," F. C. Shepard, Montgomery, Ala.; "Ports and Waterways of the South," Hon. J. Ed. O'Brian, Pensacola; "The Press of the South and Its Relation to the Industrial Development of the South," R. H. Edmonds, editor of the Manufacturers' Record, Baltimore, Md.; "The Banking Interests of the South," W. S. Witham, Atlanta, Ga.; "The Schools of the South," Dr. J. L. M. Curry, Hon. J. W. Abercrombie; "The Mineral Resources of the South," Gen. J. T. Wilder, Knoxville; "Law and Order in the

South," ex-Governor Thomas G. Jones, Montgomery, Ala.

Opportunities at Hamburg.

In a letter to the Manufacturers' Record Mr. Robert Ganz, of the European Bureau of American Manufacturers at Hamburg, writes: "I wish to thank you for your favor of August 10, as also for a copy of the Manufacturers' Record, which I have perused with interest. I shall write to some of your advertisers this week for some of their articles which are salable here. As far as the possibility of introducing American goods into Continental Europe is concerned, I would say that Hamburg is the largest port in Continental Europe, and does the largest business, London and Liverpool being, of course, larger than Hamburg. There is an opening for American machinery and American tools, and I personally do a very large business in that line, one of the largest that is done here, and I am ready and desirous to represent the interests of American manufacturers, especially of such who are desirous of maintaining a high standard for their goods, and have a reputation for the quality of the latter. Incidentally I would say to them that there is a market at present for large quantities of ash handles, such as are used for hay and dung forks, and also for rakes. I shall be pleased to advise you from time to time of lines that I am interested in, and which are salable here. I would say that I can use a few thousand lawn mowers of good quality, and that I shall be pleased to have offers on same. They must not cost more than \$1.55 f. o. b. New York. Manufacturers making me their offers should state what their price is, both for the varnished as well as for the unvarnished article, as it makes a difference in the classification of duty."

Literary Notes.

The Mineral Industry; Its statistics, technology and trade in the United States and other countries to the end of 1898. Edited by Richard P. Rothwell. Publisher, the Scientific Publishing Co., New York and London. Price \$5.

This is the seventh volume in a series which has been eminently successful. The present volume has been issued with no sparing of labor or expense, and with a determination to secure in its preparation the services of the most eminent authorities on the several subjects treated, so as to make it an accurate, trustworthy and up-to-date encyclopedia of the industries which it thoroughly covers. Beside the contributions of special articles by eminent authorities, the editor has used the results of courteous co-operation of many thousands of producers who have furnished statistics of their output, and of many persons prominent in various branches of the mineral industry who have special information. Especially valuable assistance has been given by officials of many railroads of the United States and Mexico, and by the State geologists, commissioners of mines and the inspectors of mines in most of the States of the Union. Statisticians of foreign lands, experts of many parts of the world and officials of the United States and some from abroad have added greatly to the value of the work. The introduction, which follows brief sketches of some of the leading contributors, gives a broad, statistical summary of the mineral outputs of the country. In order, then, are treated aluminum and alum, ammonia and ammonium sulphate, antimony, arsenic, asbestos, asphaltum, barytes, bismuth, borax, bromide, calcium carbide, carborundum, cement, chromium and chrome ore, the clay in-

dustry, principles of fire-brick manufacture, with a special article on paving bricks in the middle West, kaolin, coal and coke, coal-mining methods, the occurrence and utilization of peat, copper, electrolysis and refining of copper, feldspar, fluor spar, garnet, gems and precious stones with their identification, gold and silver and the progress and metallurgy of gold and silver, gold milling, the hydro-metallurgy of silver, graphite, gypsum, iron and steel, manufacture of nickel, steel, lead, with recent improvements in smelting, limestone and lime burning, magnesium, magnesite, manganese, mica, molybdenum, monazite, nickel and cobalt, ochre and oxide of iron pigments, petroleum, phosphate rock and phosphorus and the manufacture of acid phosphate of lime, platinum and iridium, potash and potassium, quicksilver, salt, silica, slate, soda and sodium, stones, sulphur and pyrites, chamber sulphuric acid, tale and soapstone, tin, tungsten, zinc and cadmium, with special articles on the progress in ore dressing, metallography and the mining stock exchanges. A notable feature of the volume is that it is the only work published in any language that gives the statistics of the mineral industry of the whole world. The glance of the contents of the present volume, which has been given, indicates its broad scope and its value to scientists, technologists, writers in the special fields and practical mineralogists.

The September issue of The Ladies' Home Journal is an unusually attractive number. On the first page is given a series of pictures of "The Wayside Inn of Sudbury Town," made famous by Longfellow. Barton Cheyney contributes an instructive article on "The Young Man and the Professions," telling young men how to take up the study of law, medicine, architecture, etc. Charles T. Broadhead has an illustrated article on "The East-Side Girl of New York," and Patti Lyle Collins tells "Why Six Million Letters Go Astray Every Year." Neltje Blanchan contributes her seventh paper on "Nature's Garden," telling of the wild flowers that bloom in September. An interesting page of pictures is presented showing "The Social Side of the Trolley," and there is also a double page of pictures of "The Prettiest Country Homes in America." Julia Marlowe writes of "Dramatic Performances by Amateurs," "Bringing in the Sheaves," by John Northern Hilliard, is a timely account of harvesting in the West.

The adoption by the United States government for use in the schools in Porto Rico of Carnex's "Sight Word Reading Chart and Phonic Exercise and Primer" is a gratifying and practical compliment to a Southern author and a Southern publishing firm. The author is Miss Fannie D. Carnex. She is a teacher in the primary department of the public schools of Roanoke, Va., and has for years devoted herself to the support of her invalid father and herself. The publisher is the B. F. Johnson Publishing Co. of Richmond, Va., to the value of whose successful work in issuing Southern textbooks attention has more than once been called. The chart, which was originally adopted for exclusive use in the Virginia schools, has been taken up in other States, and the publisher is arranging to introduce it into South American countries. Its simplicity and thoroughness carried it to success with the United States government in a competition with issues of a number of publishers.

Frank Leslie's Popular Monthly for September is a bright, breezy salt-water number. Rear-Admiral Winfield Scott

Schley, "A Naval Hero of Today," figures at the front in a capitally-illustrated biographical sketch, followed by a supplementary article telling what "Admiral Schley Said—," in his own picturesque and energetic language. F. Hopkinson Smith, the popular artist and writer, and who is also by profession a practical builder of lighthouses, tells of "The Building of the Race Rock Lighthouse," and illustrates the vivid narrative with his own drawings. In "The America Cup Defenders," Col. William E. Simmons reviews, with pictures by Frank Adams, all the international yacht races, from the America's first victory in England in 1851 down to this year's contest of Shamrock and Columbia.

In the eighteenth century Joseph Balsamo, Count of Cagliostro, a Sicilian sorcerer and scientist, gained renown in European courts as a fortune-teller. He prepared a book of destiny, based upon the twenty magic circles. This volume, a curiosity in its way, and containing ingenious answers to questions relating to the present or future, has been translated and modernized and published for seventy-five cents by Laird & Lee of Chicago, Ill. Of course, the majority of persons are not supposed to believe in the occult virtues of the twenty magic circles, and yet many a skeptic will be surprised if not startled at the revelations of the oracle. The book of destiny promises to furnish pastime of an interesting character during the long winter evenings.

Current History, published quarterly at Boston, Mass., and giving a summary of the world's news and progress, opens its issue for the past quarter of the year with a remarkable article on wireless telegraphy, in which the Marconi and other systems are described. Other topics fully treated are the issues of the Spanish war, conference at The Hague, Samoan difficulty, Alaskan boundary, Dreyfus affair, Far Eastern problem, Transvaal crisis, Venezuelan boundary, strikes, liquid air, color photography, the trust problem and biographies of prominent persons.

Among the leading articles in the September number of Cassier's Magazine are "American Locomotives in Great Britain," "Industrial Organization," "Untrammelled Shipbuilding and Marine Engineering Development," "Iron in Ornament," "Some Reasons for the Excellence of American Machinery" and the "Automobile Situation."

Preliminary to the publication of the official report of the "Mineral Resources of United States, 1898," Mr. David T. Day, chief of the division of mineral resources, has, by authority of the director of the United States Geological Survey, issued a chart furnishing a handy means for a study of the mineral products of the United States from 1889 to 1898.

A dispatch from Cedartown, Ga., states that the property of the Cherokee Iron Co., including the Cherokee furnace at Cedartown, has been bought by a Northern syndicate for \$150,000, which has also purchased the property of the Augusta Mining & Investment Co., the Talladega furnace and the road running from Pell City, Ala., to Talladega, Ala.

A dispatch from Raleigh, N. C., states that the stockholders of the Raleigh & Gaston Railway voted on Wednesday in favor of consolidation of it with other roads in the Seaboard railway system.

A firm of sugar planters at Calcutta, India, has ordered from the Chattanooga Plow Works a complete outfit of sugar-making machinery, including a mill, rollers, crushers, refiners, etc.

TWELVE MONTHS' COTTON HISTORY.

Review of the American Crop of the Season of 1898-99.

By Col. Henry G. Hester, Secretary New Orleans Cotton Exchange.

The cotton crop of the United States for the year ending August 31, 1899, amounts to 11,274,840 bales, showing an increase over the crop of 1897-98 of 74,846, over that of 1896-97 of 2,516,876 and over that of 1895-96 of 4,117,494. The excess over last year has been entirely in Texas, where the yield was greater than ever before in its history. The Atlantic States show about the same, while the Gulf States have suffered a marked diminution.

Compared with last year, in round figures, Texas (including Indian Territory) shows an increase of 480,000 bales, the group known as other Gulf States (consisting of Louisiana, Arkansas, Mississippi, Tennessee, Missouri, Oklahoma, Utah and Kansas) a decrease of 414,000, and the Atlantic States (Alabama, Georgia, Florida, North Carolina, South Carolina, Kentucky and Virginia) an increase of 9000.

The year has been most unsatisfactory. The yield of cotton has been the largest ever produced, but while the heavy movement has been partially offset by an active demand for consumption, both at home and abroad, the character of the crop has been poor, resulting in decreased money returns, both from pressure of the supply upon the demand and the lower average in grade.

The season for gathering the crop was one of the worst, if not the worst on record, and the stress of unfavorable weather, with scarcely a parallel during the fall and winter, destroyed many thousands of bales in the fields, and of that which was saved there was an unusual percentage of low and trashy descriptions. A careful investigation at the various leading centers convinces me that weather conditions of last winter reduced the crop from a half to a full grade compared with that of 1897-98, and that the damage to the entire crop from this source amounted to about \$20,000,000 in values, most of which was borne by the Mississippi valley. The average grade of the 1897-98 crop was middling; the average of this crop is low middling to barely strict low middling.

On a basis of middling cotton a fair average for the United States has been five and twenty-five-one-hundredths cents per pound, against five and sixty-four-one-hundredths last year and seven and thirty-two-one-hundredths in 1896-97, the highest price touched having been six and six-one-hundredths and the lowest four and seventy-five-one-hundredths, so that on its merits the average of the market for spot cotton in the United States has been thirty-nine-one-hundredths of a cent lower. As stated, however, the class has been from a half to one grade less, making a difference of thirty-seven-one-hundredths, so that a fair average all around for the crop this season would be but four and eighty-eight-one-hundredths cents per pound.

The Commercial Crop.

The average commercial value of the crop has been \$25.08 per bale, against \$28.62 last year, \$36.76 the year before and \$41.09 in 1895-96, and the total value of the crop compares with the previous five years as follows:

	Bales.	Value.
1898-99	11,274,840	\$282,772,987
1897-98	11,199,994	320,552,006
1896-97	8,757,964	321,924,834
1895-96	7,157,346	294,095,347
1894-95	9,901,251	297,037,530
1893-94	7,549,817	283,118,137

In a word, the money value of the cotton crop just marketed is slightly under that of the 1893-94 crop, which was 3,725,023 bales less.

In giving the usual approximation of the actual growth it must be remembered that the figures are for cotton saved. It will never be known how much was lost in the fields by reason of extraordinary weather conditions. In fact, there is no basis for an estimate of the loss, but it may, with reason, be placed anywhere from 500,000 to 750,000 bales; so that by the words "actual growth" is meant total number of bales secured for marketing. The following are the figures:

Commercial crop of 1898-99	11,275,000
Less old cotton left over from 1897-98	330,000
Plus growth 1898-99 marketed in 1897-98	29,000
Grown, not marketed in 1898-99	525,000
	11,499,000
Deduct August receipts of new cotton of the growth of 1899-1900	79,000
Actual growth of 1898-99 (bales)	11,420,000

As shown above, the commercial crop contains a part of the growths of three seasons.

The quantity of new cotton included in this commercial crop is considerably above the average of the previous five years, the comparison being as follows:

	Total commercial crop.	August receipts, new cotton included.
1898-99	11,274,840	78,521
1897-98	11,199,994	29,152
1896-97	8,757,964	84,030
1895-96	7,157,346	165,969
1894-95	9,901,251	7,656
1893-94	7,549,817	36,868

Of course, no note is taken of new cotton, except such as has actually arrived at the ports and been counted in the commercial crop. The grade of 1899-1900 growth received thus far is from strict middling to good middling, the latter for the Atlantic States, and is said to be of excellent color and staple.

The Round Bales.

Throughout this report light-weight round bales have been counted as equivalent to half-bales, so that every bale noted in these tables is equal to the usual standard

bale of the average of the crop. The total deductions on account of light-weight round bales have been as follows:

	Receipts, half-bales.	Equal to standard-weight bales, and so counted.
New Orleans	10,450	5,225
Galveston	19,469	9,735
Savannah	2,401	1,200
Charleston	1,602	801
Norfolk	6,580	3,290
Pensacola	17,401	8,700
Overland points	75,641	37,821
Total	133,544	66,772

These are the official figures furnished by the exchanges and transportation lines.

In addition, I am indebted to the companies controlling the round-bale systems for data by which the data are practically corroborated. Of course, above deals only with half-bales, those of standard weight counting the same as square bales.

Activity of Mills.

The year has been an active one for American mills, both North and South. Low prices for the raw material and improved values for manufactured goods have aided Northern spinners to recover from the depression of the two previous years, and the result has been a larger consumption of cotton and the heaviest domestic takings on record. The consumption of Northern mills has been about their takings, and they now hold a stock of about 412,000 bales, the same as at the close of last season. The yearly figures since 1890 are submitted as follows—the column of Northern mills shows "takings," while that of Southern mills comprises actual consumption:

Year ending August 31.	Northern mills. Bales.	Southern mills. Bales.	Total.	Crop.
1890	1,789,258	546,894	2,336,152	7,311,392
1891	2,027,362	604,601	2,632,023	8,652,597
1892	2,190,706	686,090	2,876,846	9,035,379
1893	1,687,286	743,848	2,431,134	6,700,365
1894	1,601,173	718,515	2,319,688	7,549,817
1895	2,085,839	862,838	2,948,677	9,901,251
1896	1,600,271	904,701	2,504,972	7,157,346
1897	1,804,680	1,042,671	2,847,351	8,757,964
1898	2,211,740	1,231,841	3,443,581	11,199,994
1899	2,190,005	1,399,399	3,589,404	11,274,840

In my last annual report I submitted a comparative showing of cotton spindles by States compared with 1890. So far as concerns the States outside of the cotton belt the total number of spindles is practically the same as last year. In fact, there seems no disposition to invest in new mill property outside of the South. As will be seen by reference to the regular report on Southern consumption given elsewhere, the activity within the past year in building new mills in the cotton States is without parallel. More than 300,000 spindles have been added to the mills in operation, and there are now being erected in old and new concerns nearly 825,000 spindles. In addition to this, there are projected in every Southern State cotton manufactories covering many thousands of spindles. Margins that make the Eastern spinner barely whole afford a fair profit in the South, and as long as this is the case the tide of cotton manufacturing will continue to rapidly increase in the cotton States. Trade conditions born of the unexampled prosperity of the country as a whole aided materially in relieving Northern spinners from their depression; the underlying conditions, however, have not changed, and the tendency to an eventual transfer South of most of the cotton industry is today stronger than ever. Whatever may be the outcome of the rumors so widely circulated of the possibility of most of the Northern and Eastern mills being formed into a trust, unless those of the South meet with a similar fate, there cannot be the slightest doubt as to the brilliant future of the Southern cotton manufacturing.

Tendency to Concentration.

An interesting fact is the tendency to build larger mills and curtail unnecessary expenses. The average of spindles in the mills of the South compared with the previous five years is given in illustration:

	1898-99	1897-98	1896-97	1895-96	1894-95	1893-94
Spindles	9,004	8,263	7,990	7,775	7,394	6,486

American Cotton Crop for Four Years.

(Year Ending Close of August.)

	1898-99. Bales.	1897-98. Bales.	1896-97. Bales.	1895-96. Bales.
Port receipts	8,575,426	8,769,360	6,829,100	8,006,177
Overland to mills	1,345,623	1,237,813	940,482	1,087,101
Southern consumption	1,399,399	1,231,841	1,042,671	862,838
	11,320,448	11,239,014	8,812,253	9,956,116
Less taken by Southern mills from ports	45,608	39,020	54,289	54,865
Total crops	11,274,840	11,199,994	8,757,964	9,901,251
Exports:				
Great Britain	3,540,473	3,543,330	3,018,462	3,443,574
France	796,516	816,386	702,632	774,476
*Continent and channel	3,017,415	3,180,164	2,250,289	2,500,911
Canada overland	99,986	118,657	80,617	99,316
Total exports	7,454,390	7,658,537	6,052,000	6,818,277
Stock close of year	597,162	175,411	77,654	280,091
Northern mill takings	2,190,095	2,211,740	1,804,080	2,083,839
Average gross weight of crop per bale, lbs.	513.86	506.90	502.08	508.72

*Including Mexico, Japan and China, details of which are given in Export Table.

COTTON CONSUMPTION IN THE SOUTH.

Census of Southern Mills for Year Ending August 31, 1899, made up from Actual Returns from Every Cotton Mill in the South.

The season just closed has been one of the most active in the Southern cotton-milling industry on record. Practically, all of the mills have run full time, and many night and day, and while there were a few exceptional complaints toward the close of the season of unsatisfactory margins, the reports received show a year of unexampled prosperity. Nearly every mill in the South has shared in the increased consumption of cotton to a greater or less extent, and practically all of them have enlarged or are enlarging their capacity. At no time in the history of the Southern States has the activity in building new mills been so great. Twenty-six mills have been added during the year to the number in operation, and fifty-seven are now in course of erection. Altogether there has been an increase of 318,905 in the number of spindles in operation, and there are now being erected in old and new mills 823,354 spindles. This, at the present rate of consumption in the South, would give a capacity per annum of nearly 1,750,000 bales. This compares with the fact that five years ago Southern mills

used only 719,000 bales. It is true that a considerable percentage of the new spindles may not be in working order in time for the coming season, but still there is room for a marked increase in consumption from that source provided that the trade outlook continues anything like fair.

In addition to the very large number of new spindles now building, there are numerous projects for the erection of additional cotton mills in nearly all of the cotton States, amounting to many thousands of spindles. In the figures I have given nothing has been included excepting mills actually being built. There has been a tendency in some of the public prints to exaggerate, although the actual facts in relation to the progress of cotton milling in the South are sufficient of themselves to indicate how rapidly the transfer of the industry to the States of the cotton belt is progressing.

The roster of mills is shown as follows:

Total number last year.....	491
Crossed out and merged into other concerns.....	7
Burnt.....	9

New and uncompleted added to list.....	482
	68

Total number of cotton mills in the South..... 550

This makes the net addition to the number of mills fifty-nine, against a net addition of nine last year. The total comprises spinning and weaving mills only. In short, none are considered except those that use raw cotton.

The record of spindles in the South shows:

	This year.	Last year.
Total in operation.....	3,999,646	3,680,741
Idle.....	129,092	125,160
New, not completed.....	823,354	251,343
Grand total.....	4,952,092	4,057,244

showing an increase of spindles, old, idle and not complete, over last year of 894,848 and a gain of spindles at work during more or less of the past year of 318,905.

As indicated by the tables annexed, the total consumption in all the mills, old and new, for the year was 1,399,399 bales, against 1,231,841 last year and 1,042,671 for the season of 1896-97, an increase over last year of 167,558 bales and over year before of 356,728.

The changes in each State as compared with last year were as follows:

	Gain.	Loss.
Bales.	Bales.	Bales.
Alabama.....	31,601	
Arkansas.....	1,288	
Georgia.....	13,190	
Kentucky.....	686	
Louisiana.....	1,976	
Mississippi.....		186
Missouri.....	233	
North Carolina.....	49,676	
South Carolina.....	65,824	
Tennessee.....		2,335
Texas.....	1,365	
Virginia.....	4,240	
Totals.....	170,079	2,321
Total net gain.....	167,558	

The increase in the average consumption per spindle in the mills in operation has been 5.85-160 pounds. The comparisons for the past eight years are annexed:

Average Consumption per Spindle by Southern Mills.

	Pounds per spindle.
1898-99.....	162.51
1897-98.....	155.06
1896-97.....	140.16
1895-96.....	142.67
1894-95.....	104.45
1893-94.....	147.00
1892-93.....	160.30
1891-92.....	160.00

The progress of the industry during the past ten years is shown at a glance as follows:

	Consumption.	Increase.	Decrease.
Bales.	Bales.	Bales.	Bales.
1889-90.....	546,894	65,719	
1890-91.....	604,661	57,767	
1891-92.....	686,080	81,419	
1892-93.....	743,848	57,768	
1893-94.....	718,515		25,333
1894-95.....	862,838	144,323	
1895-96.....	904,701	41,863	
1896-97.....	1,042,671	137,970	
1897-98.....	1,231,841	189,170	
1898-99.....	1,399,399	167,558	

Net increase in ten years, 918,224 bales.

In reference to Southern mill weights it must be remembered that they are given net, that is, exclusive of bagging and ties.

Southern Cotton Mills, Looms and Spindles.

The following tables give details of the condition of Southern mills in 1898-99:

	Total.	In operation.	Idle.	New, not completed.
Mills.				
Alabama.....	47	38	1	8
Arkansas.....	3	3		
Georgia.....	95	70	3	13
Kentucky.....	13	12	1	
Louisiana.....	5	2	3	
Mississippi.....	10	9	1	
Missouri.....	3	3		
North Carolina.....	214	183	3	25
South Carolina.....	103	87	3	9
Tennessee.....	33	22	1	9
Texas.....	8	4	3	1
Virginia.....	16	15	1	
Total.....	550	448	11	57
Last year.....	491	421	12	21

*Including mills commenced this year and those under this head last year not yet completed.

	Total.	In operation.	Idle.	Not complete.	Total.
Looms.					
Alabama.....	7,710			1,660	9,370
Arkansas.....	310				310
Georgia.....	17,915	356		2,966	21,237
Kentucky.....	1,719	242		1,061	2,781
Louisiana.....	1,584	11		1,595	3,190
Mississippi.....	2,048	240		182	2,470
Missouri.....	374				374
North Carolina.....	24,154	176		2,889	27,219
South Carolina.....	39,780	402		5,692	45,874
Tennessee.....	2,778	1,178		3,956	6,912
Texas.....	1,042	43		247	1,332
Virginia.....	5,032				5,032
Total.....	104,446	2,738		13,636	120,820
Last year.....	90,541	4,024		2,740	103,305

Spindles.

	Total.	In operation.	Idle.	New, not completed.
		Old.	New.	
Alabama.....	510,530	356,862		151,468
Arkansas.....	13,400	13,400		
Georgia.....	926,044	720,712	26,468	178,864
Kentucky.....	76,535	71,191		5,344
Louisiana.....	65,352	55,752		9,600
Mississippi.....	76,622	64,138		12,484
Missouri.....	12,332	12,332		
North Carolina.....	1,283,638	1,040,910	3,660	239,168
South Carolina.....	1,626,370	1,328,954	19,300	278,116
Tennessee.....	163,204	110,740	1,028	51,436
Texas.....	54,642	34,776		19,866
Virginia.....	143,423	138,983	440	4,000
Total.....	4,952,092	3,948,750	50,896	823,354
Last year.....	4,057,244	3,062,919	17,822	251,343
Year before.....	3,851,991	3,363,011	56,652	289,180

*Nearly all practically useless.

†Includes spindles being added to old mills, as well as those in new concerns.

‡Including spindles added to old mills, less spindles thrown out during year.

Southern Cotton Consumption, Year Ending August 31.

(Actual figures reported by the mills.)

States.	*No. mills.	†Looms.	‡Spindles.	1899.	1898.
Bales.					
Alabama.....	38	7,710	356,862	132,763	101,162
Arkansas.....	3	310	13,400	3,182	1,894
Georgia.....	73	17,915	747,180	271,807	258,617
Kentucky.....	12	1,719	71,191	26,842	26,156
Louisiana.....	9	1,584	55,752	18,025	16,049
Mississippi.....	10	2,048	64,138	19,894	20,080
Missouri.....	3	374	12,332	3,968	3,735
North Carolina.....	186	24,154	1,044,570	382,477	352,801
South Carolina.....	90	39,780	1,348,254	443,978	378,154
Tennessee.....	23	2,778	111,768	34,316	36,651
Texas.....	4	1,042	34,776	16,059	14,694
Virginia.....	16	5,032	139,423	46,088	41,848
Totals.....	459	104,446	3,999,646	1,399,399	1,231,841
Less consumed and taken from Southern seaports and included in port receipts.....				45,608	30,020
Net consumption to be added to crop.....				1,353,791	1,192,821

*Mills in operation only. For total in South see other table.

†Employed in mills in operation. For total spindles in South see other table.

Consumption of Southern Mills in Pounds.

The following shows the consumption of Southern mills during the past two years in pounds of lint cotton and the average net weights per bale:

	Pounds (lint).		Average weights.	
	This year.	Last year.	This year. *Per bale.	Last year. *Per bale.
Alabama	63,693,178	48,515,381	479.75	479.58
Arkansas	1,567,906	938,200	492.76	495.35
Georgia	126,791,506	121,008,997	466.48	467.90
Kentucky	13,242,136	12,806,120	493.34	489.60
Louisiana	8,648,756	7,454,881	479.82	472.84
Mississippi	9,544,800	9,424,989	479.78	469.37
Missouri	1,971,327	1,748,000	496.80	468.01
North Carolina	174,574,996	150,802,889	456.43	453.13
South Carolina	203,509,453	175,248,016	458.71	463.43
Tennessee	16,593,019	17,829,793	484.81	486.47
Texas	8,054,175	7,381,564	501.53	502.35
Virginia	21,801,437	19,788,278	473.04	472.86
Totals	640,092,749	572,046,308	464.48	465.11

*Exclusive of bagging and ties.

Consumption United States.

	1898-99.	1897-98.
Total crop United States.....	11,274,840	11,190,904
Stock at ports beginning of year.....	175,411	77,654
Total supply.....	11,450,251	11,277,648
Exported during the year.....	7,354,404	7,539,880
Sent to Canada.....	99,986	118,657
Burnt at delivery ports.....	9,205	110
Stock at close of year.....	397,162	175,411
Total takings for consumption, United States.....	7,860,757	7,834,067
Of which—		
Taken by spinners in Southern States, total.....	3,589,494	3,443,581
Taken by Northern spinners.....	1,399,399	1,231,841
Taken by Southern spinners.....	2,190,005	2,211,740

Average Mill Takings in Bales.

	This year, bales.	Last year, bales.
Average weekly takings, Northern mills.....	42,117	42,533
Average weekly takings, Southern mills.....	26,912	23,670
Average weekly mill takings, United States.....	69,029	66,203
Average monthly takings, Northern mills.....	182,508	184,312
Average monthly takings, Southern mills.....	116,616	102,653
Average monthly mill takings, United States.....	299,124	286,965

Weight of Bales, 1898-99.

	No. bales.	Average weight, pounds.	Total weight, pounds.
Louisiana.....	2,231,717	517.20	1,154,244,032
Texas, etc.....	2,544,890	533.85	1,358,589,526
Alabama.....	263,869	513.24	135,428,126
Florida and Georgia.....	1,538,457	496.94	764,520,822
South Carolina.....	396,168	485.58	192,371,257
Virginia.....	714,186	493.69	352,586,486
North Carolina.....	291,365	498.00	145,009,770
Tennessee, etc., and consumed in the South not above included.....	3,294,188	513.61	1,691,927,898
Total crop.....	11,274,840	513.96	5,794,767,917
Last year.....	11,190,904	506.90	5,677,259,827
Year before last.....	8,757,964	502.08	4,397,177,704

Receipts of New Crop Prior to September 1 at Leading Outports.

	1899, bales.	1898, bales.
New Orleans.....	15,906	4,174
Galveston.....	45,301	22,600
Mobile.....	1,292	261
Savannah.....	12,970	1,623
Charleston.....	1,330	404
Wilmington.....	1,667	65
Norfolk.....	55	25
Total.....	78,521	29,152
Port receipts for August.....	*126,236	*105,702

*Including net plus correction for year, and yearly additions of minor points, 5242 this year and 44,806 last year.

It is estimated that not less than 2000 country road and railroad bridges were destroyed or severely damaged by the floods in Texas, and a dispatch from Austin says that all bridge-manufacturing companies of the North and East are reaping a rich harvest in building new structures or repairing damaged ones.

Work has begun by the Newport News Shipbuilding & Dry-Dock Co. upon two

18,500-ton Pacific Mail steamships, said to be the largest ever built on the American continent. They will cost about \$2,000,000 each.

The enlargement of present buildings by some firms and the erection of new ones by others, a movement never before as large in the city, is regarded as the most promising sign of a large fall trade at Louisville, Ky.

RAILROAD NEWS.

[A complete record of all new railroad building in the South will be found in the Construction Department.]

A Handsome Depot.

Mr. W. A. Chesterman of Richmond, Va., will, it is reported, secure the contract for the building of the Southern Railway depot in that city. The building, of granite and hard-pressed brick, with green slate roof, will front seventy feet on Main street, with a depth of 175 feet on Fourteenth street, with an ornamental tower 100 feet high at the corner. On the right hand of the entrance, which will be by a spacious vestibule in the tower, will be the waiting-room, with ticket office, ladies' parlor and other conveniences adjoining. A special waiting-room will be arranged for colored women. A stairway from the main hall will lead to the offices of the various officials on the second floor. The waiting-room will be 40x50 feet, with a ceiling twenty-one feet high, and handsomely decorated, the floor being laid with marble tiles. A spacious train shed will adjoin the building on the west. Fourteenth street between Main street and the depot will be widened for a considerable portion of the distance and laid with asphalt.

In a Timber Region.

Work is under way upon the second section of five miles of the Natchez, Urania & Ruston Railway, which is projected to run from Urania, on the St. Louis, Iron Mountain & Southwestern, in a north-westerly direction to Ruston, sixty-two miles, passing through portions of Caldwell, Winn, Jackson and Lincoln parishes, and southeasterly to Natchez, through the central portion of Catahoula and Concordia parishes. The road passes through a rich agricultural and timber region containing virgin forests of long-leaf yellow pine, oak, gum, hickory and cypress. The road will be built by easy stages and the resources of the country will be developed as it is built and saw mills will be put in operation at convenient points. Messrs. Charles W. LaCroix and Henry E. Hardtner were the projectors of the undertaking. The latter is president and general manager, and the former vice-president.

Wilmington to Southport.

Manager W. A. Guthrie, who represents the Philadelphia capitalists behind the Southport, Wilmington & Western Railway Co., which is to construct a road from Southport to Wilmington, says the work of surveying will begin shortly. The company has authorized to consolidate stock and merge its property and franchises with those of any other transportation company whenever they will be directly connected. The road will be about thirty miles long, but the Raleigh News and Observer points out that it could be made the seaward link of an east and west line connecting the coal regions with deep water and also tapping a grain-growing and cattle-raising section by roads already in operation, under construction or planned through Western North Carolina, Eastern Tennessee and Southwest Virginia.

Cape Henry and Norfolk.

With two corporations, the Chesapeake Transit Co. and the Princess Anne & Cape Henry Railway Co., seeking rights of way, the prospects of the construction of a road from Cape Henry to Virginia Beach are regarded as excellent. The road as planned is to be of the standard gauge, and is to connect with the Norfolk & Virginia Beach and Southern Railway

at Virginia Beach, by which a rich timber region will be brought into close touch with Norfolk. It is estimated that the new line will tap 50,000,000 feet of good timber. It is also proposed to erect in that region a lumber factory which will employ from 1000 to 1500 men, two wood-working establishments, harness factory and perhaps a malleable-iron works. Mr. O. D. Jackson is interested in the plan.

New Road Suggested.

Mr. H. C. Medford of Tupelo, writing to the Manufacturers' Record suggesting that a railroad line should be built across the northern part of Mississippi, connecting Arkansas City, Ark., and Decatur, Ala., by way of Grenada and Tupelo, Miss., says: "I take it from the Manufacturers' Record and other sources that capital is restless, and is seeking more and more safe investment. We have not nearly enough railways and other enterprises in our State, yet the State is comparatively fresh, and opportunities for safe and profitable investment of capital are numerous."

The Pennsylvania to Control.

The Pennsylvania Railroad, by purchase of \$2,000,000 of securities of the Baltimore, Chesapeake & Atlantic Railway Co., has obtained controlling interest in the road. Mr. John E. Searles was the principal owner of the road, which operated ninety miles of railroad from Claiborne to Ocean City, on the Eastern Shore of Maryland, fourteen steamers on the bay and 100 wharf properties. President John S. Wilson of the company is quoted as expressing satisfaction that the road has passed into the hands of the Pennsylvania.

Its Purpose Declared.

In the declaration by the incorporators of the proposed Chattanooga, Augusta & Charleston Air Line made at Columbia, S. C., it is stated that the route of the road through South Carolina will be from Charleston through Charleston, Dorchester, Colleton, Bamberg, Barnwell, Richmond and Aiken counties to the Georgia line. It is also stated that the corporation will operate the line as a part of the Seaboard Air Line, and proposes to consolidate it with the latter.

Mr. Emerson Chosen.

Mr. T. M. Emerson, traffic manager of the Atlantic Coast Line, has been selected by the East Carolina Fruit and Truck Growers' Association to select the company which is to supply the refrigerator car service for the movement of next season's truck and berries. The selection of Mr. Emerson is, in the language of one of the committeemen, an indication of the implicit confidence in his judgment and his kindly feeling for the best interests of the association.

Railroad Notes.

During August the Nashville, Chattanooga & St. Louis Railway handled 18,932 cars.

The West Virginia & Pittsburg Railway has become a part of the Baltimore & Ohio Railway.

The Atlantic & Danville Railroad has been leased by the Southern Railway Co. for ninety-nine years.

Work has begun upon the new passenger depot of the Central of Georgia Railroad Co. at Americus, Ga.

Mr. J. V. McNeil has succeeded as treasurer of the Baltimore & Ohio Railroad Co. Mr. W. H. Ijams.

It is expected that within a year New Orleans will be connected with Selma, Ala., by the construction of a link of the

Louisville & Nashville between Repton and Pineapple.

The Mobile & Ohio Railroad Co. has signed a lease for a long term of quarters for its passenger business at New Orleans.

The link connecting the Clarksdale and the Jackson branches of the Yazoo & Mississippi Valley Railroad has been completed.

It is reported that the wages of all employees of the Southern Railway will have been restored to the 1896 basis by about September 10.

It is reported that Mr. C. P. Huntington has acquired the extensive coal fields in the State of Sonora, Mexico, which will be developed in the operations by the Southern Pacific system.

By its 99-year lease of the Atlantic & Danville Railroad the Southern Railway will be able to cut off about eighteen miles between Norfolk and Greensboro, N. C., and to farther Southern points.

The construction force of the Richmond, Petersburg & Carolina Railway Co. has, it is announced, about completed the laying of rails from Ridgeway to the Roanoke river, about twelve miles.

The Choctaw & Memphis now has 100 miles of track laid from the Indian Territory line to within forty-five miles of Little Rock, at which end of the line seven miles have already been laid.

Five thousand persons participated in a celebration at Columbia, Mo., of the completion of the Missouri Midland Railway to McBain, where it connects with the Missouri, Kansas & Texas Railway.

The final monthly report, that for June, of Receivers Cowen and Murray of the Baltimore & Ohio Railroad has been filed in court. It shows total receipts \$5,814,383.60 and disbursements \$3,087,737.68.

The attractive new offices of the Southern Railway Co. have been opened at Charleston, S. C., in a building which has been entirely remodeled inside and on the front to suit the needs of the business.

The heading of the tunnel of the Tennessee Central Railway at Rockwood, Tenn., was blown through last week, and it is expected that the laying of ties will be commenced within seven or eight weeks.

Mr. H. E. Hutchens has been appointed superintendent of the Danville division of the Southern Railway Co., under which title the Atlantic & Danville Railway Co., leased by the Southern, will be operated.

Two engines lately purchased by the Illinois Central Railroad to haul freight over the hilly section between Carbondale and Fulton, Ky., weigh each more than 162 tons, and are guaranteed to pull 100 carloads.

The completion of the new Cape Fear & Northern Railroad from Apex to Angier, N. C., a distance of twenty-one miles, was celebrated last week at Angier by an excursion and speechmaking. About 2000 people were present.

Mr. J. M. Fitzgerald has been appointed assistant to the general manager of the Virginia & Southwestern Railway and assistant to the vice-president of the Virginia Iron, Coal & Coke Co., with headquarters at Bristol, Tenn.

The Gainesville, Ocala & Charlotte Harbor Railroad Co., chartered at Tallahassee, Fla., with a capital of \$3,250,000, proposes to build a line 325 miles long from Charlotte Harbor, in Manatee county, to the Georgia & Florida line in Columbia county, Florida.

The Southern Railway is sharing in the shortage of freight cars, from which

other leading railroad lines in the country are suffering. Orders by the company for new box cars have been delayed by difficulty experienced by the manufacturers in securing the proper material.

With the completion of the laying of the track of the Wilmington, Columbia & Augusta Railroad between Florence and Sumter by the Atlantic Coast Line, it is expected that a double daily passenger service will be operated by what is known as the Florence-Atlanta route of the system by way of Sumter, Denmark, Robbins and Augusta.

The legislative council of Memphis has passed the contract of the Choctaw & Memphis Railroad. Some changes have been made in the contract as originally presented. The road is granted the right of way on Fulton street to the property leased for the terminals, and the payment to be made by the railroad company to the city for the privileges has been increased.

The locomotive ordered from the Richmond Locomotive and Machine Works by the Mississippi River & Bonne Terre Railroad will be of the consolidation type, 20x24-inch cylinders and 50-inch driving wheels. Its special equipment includes Westinghouse brakes, Janney couplers, Crosby safety valves, Nathan lubricators, Scott springs and Midvale driving-wheel tires.

The annual meeting of the Louisville & Nashville Railroad Co. will be held at Louisville October 4. The stockholders will be asked to vote on the proposition to lease the Nashville & Decatur Railroad, to sell the Pensacola & Selma Railroad to the Southern Alabama Railroad Co., or to purchase the Southern Alabama Railroad and the assumption of the entire lease of the Georgia Railroad.

The South's Potentiality.

Referring to the fact that more than 7,000,000 bales of cotton were exported last year, and to the fact of the steady increase in the textile industry in the South, the Louisville Courier-Journal says:

"This cotton could have all been worked up in factories near the plantations if we had had the facilities. It is true ocean freights are so cheap that cotton can be delivered in Lancashire almost if not quite as cheaply as at Fall River, and there is some advantage in the lower wages of the Old World. This advantage has been magnified, however, for the English spinner earns nearly as much as the American. At any rate, there would be no need of sending the raw material 3000 miles across the water if we only had the mills here sufficient to work it up. The addition to our national wealth if the spindles, say of Manchester, could only be transported to the Cotton Belt, would be almost incalculable. The day is coming when this will be done, and when it does come the South will become as thickly settled and wealthy as its natural advantages entitle it to be."

A dispatch from Nashville states that there is some excitement at Haley, on the Nashville, Chattanooga & St. Louis Railway, over discoveries of petroleum. No wells are more than 150 feet deep, but it is confidentially asserted that if they were bored to a depth of 300 feet oil would be found with sufficient pressure to bring it to the surface.

R. S. Crawford of Hagerstown, Md., is one of the directors of the American Bicycle Co., the organization of which was completed last week.

Stone for the Colbert Shoals canal, near Riverton, Ala., is being taken from the quarries near Tusculum by the United States government.

COMMERCE.

This department is devoted to a record of the rapidly developing commerce of Southern ports.

OUTLOOK IN CUBA.

Increase of Trade With the Island Expected This Month.

Southern ports are interested in the news arriving from the principal commercial centers of Cuba concerning the outlook for increasing trade. Discussing this the New York Journal of Commerce says: "Better evidences of the satisfactory conditions existing are the orders arriving. In nearly every branch of trade there is business under way for the island, and although August shipments were comparatively large, several of the prominent shippers predict an increase during September. In provisions the improvement in business of late is noticeable; some large sales of flour are reported, and during the past six days \$26,000 worth was shipped to Havana and Cienfuegos. With the improved sanitary conditions in all the large cities, a demand has developed for all kinds of plumbers' supplies, including tubes, basins, etc. The domestic boom in manufactured iron and steel has put a check on some business which might have been done with Cuba in these lines long before this. The fact that planters had but little money to spend on repairing their machinery, combined with the extraordinary advancement which everything made of iron and steel has had, added to the limited transactions in the machinery line, which are usually so large with Cuba about this time of the year, all had their effect. The dry goods, hardware, glassware and many other lines are showing a marked increase. Next to flour in the provision line, bacon, lard and ham are having extraordinarily large sales."

FOR WEST INDIA TRADE.

Jacksonville Increasing Its Ability to Handle It.

There are indications at Jacksonville that that port is preparing to acquire a large share of the West Indian and South American trade. For some months, according to a dispatch from there, agents of Mr. Henry M. Flagler and his associates have been quietly buying up all property on the south side of the St. John's river from Jacksonville to Mayport, about twenty miles, the lands fronting on the Atlantic ocean as far south as Pablo Beach, the Jacksonville & Atlantic Railroad and the rights of the abandoned Mayport-Pablo Investment Co., which is being rehabilitated. Four hundred men are now employed upon the construction of the terminals of the Atlantic, Valdosta & Western Railway at Jacksonville and at Talleyrand nearby. The improvements include three large wharves at Jacksonville and a large brick warehouse, and at Talleyrand a dock 1400 feet long, eighty feet wide, having from twenty to thirty feet of water, warehouses, a round-house, supply-houses, turntables and machine shops. These improvements, in connection with that of large expenditures by the government for the improvement of St. John's river, are full of promise of Jacksonville's substantial future.

Galveston's Shipping.

Since 1893 the receipts at the Galveston custom-house have increased from \$86,285.55 to \$208,174.44 a year. In 1893 133 steam vessels from foreign ports, with a net tonnage of 186,206, were entered in ballast in 1898. There were 396 vessels entered with a tonnage of 226,148.

The number of steamers bringing cargoes increased in five years from thirty-eight to fifty-four. Accompanying the increase of the vessels sailing to and from Galveston has been an increase of tonnage, and the exports increased from \$34,916,913 in 1894 to \$78,446,516 in 1899.

Mobile's Wharves.

In addition to the improvements of private and municipal wharves at Mobile made during the year, a dispatch from that city states that the Mobile & Birmingham road is about to begin the enlargement and modernizing of its wharf property so as to be ready for next season's shipping business, and that the Louisville & Nashville Railroad will within the next few months rebuild all its wharves at that point.

Jottings at the Ports.

Shipments of salted fish are being made from Tampa to Cuba. A carload was sent last week.

It is announced that the Mobile Steamship Co. will operate a coastwise steamer to travel from Havana to other points in Cuba.

The exports at Pensacola, Fla., last month amounted to \$1,145,517, an increase of nearly \$300,000 over those of August, 1898.

During August exports from Baltimore, Md., amounted to \$10,500,000, an increase of more than \$2,000,000 over those of August, 1898. The increase in customs receipts amounted to \$74,481.63.

In the annual report of the United States geological survey in this country in 1898 is published a review of the coal trade at Mobile by Mr. E. E. England, secretary of the Chamber of Commerce at that city.

During the past three months 2,281,981 bushels of wheat have been exported from Galveston, an increase of 953,965 bushels over the same period last year, and 416,386 bushels of corn, an increase of 319,270 bushels.

The two freight steamers to be run between Newport News, Va., in conjunction with the Chesapeake & Ohio Railway are the Knight Errant and the Samon. The former is 4447 tons and the latter 4507 tons capacity.

Preparations for the erection of buildings by the Georgia Cattle Exporting Co. at Augusta have been completed. The railroads are co-operating with the company, and the opening of the stockyards by October 1 is assured.

The United Fruit Co., a combination of firms engaged in the West India Fruit Trade, includes the Buckland Fruit Co. of Baltimore, the Snyder Banana Co. of Mobile, New Orleans and Boca del Toro, Soteri and Nacheo Bros. of New Orleans and British and Spanish Honduras, the New Orleans, Belize & Central American Royal Mail Steamship Co., the Royal Banana Co. of New Orleans and Boca del Toro, and the Planters' Steamship Co. of Galveston and Spanish Honduras.

Mr. George W. Russell, vice-president, T. M. Spalding, general manager, and other members of the Boston & Texas Copper Mining Co. have been investigating the deposits of copper in Archer county, Texas, where twenty-five men are already employed in development.

The annual meeting of the Griffin (Ga.) Manufacturing Co. was held last week. The management's report showed a most satisfactory business for the year. A sum was placed to surplus, 10 per cent. dividend declared and improvements paid for.

TEXTILES.

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the Manufacturers' Record. We shall be glad to have such matter at all times, and also to have any general discussion relating to cotton matters.

That Consolidation at Cedartown, Ga.

The Cedartown Cotton Co. of Cedartown, Ga., writes the Manufacturers' Record verifying the reports of the consolidation and giving accurate statements concerning same. The Cedartown Cotton Manufacturing Co., which was the old original plant, acquired by purchase in April last the Paragon Mills. A consolidation of all the mills, warehouses and gins was then made under the name of the Cedartown Cotton Co. The company now intends to fill the Paragon Mills, and order has been placed for 7500 additional spindles. The building is prepared to receive this machinery, so no enlargement is needed. When this machinery is in working order the company will then add 9000 spindles to the No. 1 plant; this will mean new building and all machinery except power. It is also true that Philadelphia parties intend to build and lease to the Cedartown Cotton Co. a 10,000-spindle mill, but this, while extremely probable, is not definitely settled.

President Winston's View.

President George T. Winston of the North Carolina College of Agricultural and Mechanic Arts has returned to Raleigh, after a two weeks' trip through the North and East, where he made a special study of technological schools. He announces that the textile department of the college will begin with instruction in cotton only, but he believes that it will soon include instruction in wool and silk. As soon as the building for the department is secured he expects that an abundant supply of machinery will be had.

Columbia's Latest Mill.

Messrs. W. B. Smith Whaley & Co., in writing concerning the new mill reported last week as to be located at Columbia, S. C., state particulars concerning it. The plant is designed for the manufacture of three-yard export sheeting, and will be equipped with about 6000 spindles and 200 looms. The output is to be about 4000 pounds daily. No charter has been obtained for the enterprise, nor has the name been selected, but work on it will be pushed rapidly to completion. About \$100,000 will be invested.

Cotton Mill at Denison, Texas.

The American Cotton Spinning Co. of Denison, Texas, reported last week as incorporated, has acquired the old plant at Denison, formerly the Denison Cotton Mills. The plant cost originally \$280,000 when built about eight years ago, but it has never been in operation. The new owner will operate for a time with 15,000 spindles, and hopes eventually to enlarge gradually to 50,000 spindles, the capacity of the plant. About \$75,000 is being expended for the new machinery and improvements.

Textile Notes.

A charter has been granted to the Okolona (Miss.) Cotton Mills, capital stock \$200,000.

Capt. W. H. Day of Florence, Ga., is endeavoring to organize a company to

build a 10,000-spindle mill at a cost of \$135,000.

It is stated that a negro is to act as foreman of the Ashley silk mill at Fayetteville, N. C.

The Huguenot Mills of Greenville, S. C., has just installed thirty-two additional looms, and will install fifty more.

The Crescent Cotton Mills of Rock Hill, S. C., will hold a meeting September 15 to vote upon issuing \$50,000 of bonds.

Mr. William Hunter, Sr., of Liberty, S. C., is trying to form a company to build a cotton factory; over \$75,000 has been subscribed.

Messrs. Julius E. Boggs, J. P. Carey and J. McD. Bruce of Pickens, S. C., propose the organization of a \$200,000 cotton-factory company.

The board of directors of the Southern Cotton Spinners' Association is planning to make a trip to the Northern yarn markets about September 20.

Messrs. T. L. Bramlet, R. W. Chandler, E. J. Ezell and others of Okolona, Miss., have incorporated the Okolona Cotton Mills, with capital stock of \$65,000.

Thomas Tate of Jackson, Tenn., is interested in a movement to organize a company to build a 6000-spindle cotton factory. The enterprise is progressing.

The Darlington (S. C.) Cotton Mills does intend to add 6000 more spindles, as was reported last week, but plans for the improvement have not yet been matured.

A movement for the formation of a cotton-factory company has been started at Vicksburg, Miss. The Board of Trade and Murray F. Smith are pushing the project.

Mr. Louis Kohlmann of New Orleans, La., has leased the old Semmes & Parker cotton mill at New Orleans; will expend \$4500 for improvements and operate the plant, starting with 2400 spindles.

The Wellford Ginnery Co. of Wellford, S. C., has been incorporated, capital stock \$5000, to gin cotton, manufacture bats, etc.; incorporators, Messrs. J. R. Snoddy, J. S. Ballinger, Jr., W. E. McMackin and T. E. Moore.

The Ashcraft Cotton Mills, lately organized at Florence, Ala., to erect a 3000-spindle and 100-loom mill, has consolidated with the Florence Cottonseed Oil Mills. The factory will be built adjoining the cottonseed-oil mill, to which latter will also be added a round-bale compressing plant.

The superintendent of a Canadian cotton factory has offered to take \$15,000 stock in a cotton-mill company at Corsicana, Texas, provided Corsicana citizens take the balance of a \$100,000 company. George T. Jester, president of the Commercial Club, will endeavor to meet the terms of the offer.

The McDonald Cotton Mills of Sylacauga, Ala., reported last week as having purchased site for factory, has been fully organized by Mr. E. W. Ledbetter and others. It is the purpose to establish a 10,000-spindle plant, and considerable of the needed machinery has been bought. Plans and specifications are now being prepared, and as soon as they are ready for contractors bids will be asked.

The Laurel Cotton Mills of Laurel, Miss., lately reported as being formed by W. B. Rogers, has incorporated, with capital stock of \$200,000, which can be increased to \$1,000,000. The incorporators are Messrs. Geo. S. Gardiner, W. B. Rogers, P. S. Gardiner, F. G. Wisner, all of Laurel; Dr. L. Sexton, A. Craft, T. C. Walker, A. Lenmann, Jr., all of New Orleans, La., and W. E. Oliver of Wesson, Miss. The proposed mill is to have 15,000 spindles and 500 looms.

PHOSPHATES.

PHOSPHATES AND ROSIN.

Great Activity in Both Lines in Florida.

[Special Cor. Manufacturers' Record.]
Ocala, Fla., September 4.

The Dunnellon & Port Inglis Railroad has been completed. The road is eighteen miles long, and its construction has been of the very best. The road was built by the Dunnellon Phosphate Co. to give it a cheaper and shorter method of transporting its rock. The engines and part of the rolling stock are now on the road, and are being used to haul supplies and machinery to Port Inglis City. Several of the huge barges and lighters to be used in carrying rock from the terminus of the road to Port Inglis, at the mouth of the Withlacoochee river, have already been completed, and others are in course of construction. The work of dredging out the channel has begun, but no great amount of work is anticipated in the river bed, as the draught of the lighters, even when loaded, will not be great. There is already a goodly depth of water over the bar at the mouth of the river, and with a little more dredging ships of a deep draft can load in water smooth enough for the lighters to lie in.

There is unusual activity all over Florida in the naval-stores industry, and Ocala is in the center and practically recognized as headquarters for naval-stores operators. There is an active demand for land, both to buy and lease, but the latter method is the one most adopted, as after about five years the timber will not yield enough spirits of turpentine to pay for the working of it. There are far more stills located in the State at present than for many years past, and as a result most of the large bodies of timber have been bought up or leased, making the demand in excess of the supply. Prices for spirits are good, and an advance in rosin is anticipated. Labor is scarce, and no man need be idle in Florida. Many, but by no means all, of the operators use convict labor, but many of them prefer free men, and realize better profits on their labor.

One of the most recent transfers in land is the lease of 10,000 acres of excellent pine timber land near the Ocklawaha river, in the Daisy precinct, by E. J. Copley Lumber Co. to Messrs. Hinson & Son for \$15,000. The new firm will erect an immense still three miles from the river above mentioned, and will ship their output via the river route to Palatka, and thence north by rail. H. L. Kelley, one of the county's most extensive operators, has sold his turpentine farm and stills at Rock Springs to good advantage, and is seeking a new location.

J. R. Mathews of Ocala has just consummated the sale of a large body of excellent phosphate land in Leroy county to H. G. Hazzard of Juliette, who will erect a plant upon it. Mr. Hazzard is now operating three large plants. The land was the property of the Empire State Phosphate Co. of New York, and the consideration was \$12,000.

C. B. Meerselliott of Des Moines, Ia., has purchased a body of high-grade phosphate near Fort White, for which he paid a neat sum. He will erect a plant on his purchase at no distant day. W. M. Ross consummated the sale.

In the Tennessee Field.

[Special Cor. Manufacturers' Record.]
Columbia, Tenn., September 4.

With a monthly output of 70,000 tons the phosphate-mining companies of this section are far behind on orders, and the Tennessee Phosphate Co., one of the largest exporters, has been running night

and day for three months. The price on rock has been steadily advancing, till now the smaller miners, who were once glad to receive \$2 a ton for their rock at the railroad, are getting \$4 a ton for all they can mine.

The Howard Phosphate Co., which was only organized two weeks since, mined 2500 tons of rock the first week after operations began. Two hundred and fifty miners were brought up from Birmingham, seventy-five teams of fine mules were purchased in Columbia, with wagons, harness, tools, etc., and the company began filling a large order with all haste. They will increase their output as rapidly as possible. The young man who owns the 175-acre farm upon which this company is operating receives \$1.20 a ton for all rock mined, so that his income for the first week was \$3000. The rock on the place is estimated at 600,000 tons, and the company is pledged to dig 60,000 tons at least each year.

Phosphate Markets.

Office Manufacturers' Record,
Baltimore, Md., September 7.

In sympathy with other fertilizer ingredients, the market for phosphate rock is quiet, with values firm. There is no urgent demand from manufacturers. Brokers report several sales of Florida and Tennessee rock at good figures. The charters reported last week were as follows: Schooner City of Baltimore, 297 tons, from Lewes, Del., to Charleston with dry fish scrap at 85 cents net; schooner Star of the Sea, 893 tons, from Port Royal to Baltimore with phosphate rock at \$2.45, coal out from Norfolk at \$1.25; British bark L. W. Norton, 464 tons, from Grand Connetable Island to New York with guano at \$2.75, and schooner Maggie S. Hart, 591 tons, from Cartaret to Baltimore with phosphate at 80 cents. The activity at points of production in the South is general, and the movement continues to attract marked attention throughout this country and at ports of the United Kingdom and Continent of Europe. There is a decided improvement in the South Carolina phosphate field, the royalties collected for the first six months of this year amounting to \$21,244.24, against \$12,070.25 for the same period in 1898, showing an increase of \$9174. It is expected that receipts from royalties for the year will reach \$40,000. Of the companies mining, the Coosaw, Central, Beaufort and Empire are all doing a good business. Prices hold remarkably firm, with a good domestic and foreign inquiry. In Florida the month of August was one of considerable activity at all the ports, with shipments, both foreign and domestic, quite large. The demand for both land rock and pebble is quite pronounced, and miners have all the orders they can fill for some time to come, while values are firm, with a higher tendency. In the Tennessee phosphate belt new developments are daily coming to the surface, and the excitement in mining sections continues. Some remarkable rich deposits are reported in Maury and Hickman counties, and the output is increasing daily. The export demand is very decided, foreign shipments from Pensacola in August amounting to 10,462 tons, while large shipments were made to points to satisfy the domestic demand. Values for both export and domestic rock continue firm.

Fertilizer Ingredients.

The volume of business is yet very moderate, and in the leading ammoniates the demand continues light. Animal ammoniates are firmly held, with moderate offerings in the West. Very little business is being done with Southern manufacturers. There is a fair inquiry

for dried blood, but freight rates are too high to warrant any business. Messrs. Thos. H. White & Co., in their circular for August, say: "The market for ammoniates during August has been extremely dull, a certain amount of current offerings being taken at generally declining prices. Stocks in the West are light, and sellers' asking prices and buyers' ideas are rather wide apart. Sulphate of ammonia is higher for prompt shipment, foreign being quoted at \$3.15 to \$3.20; futures at about \$3.05 to \$3.10 c. i. f. New York and Baltimore; domestic gas liquor on same basis; domestic bone liquor \$3 basis New York and Baltimore."

The following table represents the prices current at this date:

Sulphate of ammonia (gas).....	\$3 12½ @	3 15
Nitrate of soda.....	1 70 @	1 72½
Blood.....	1 97½ @	2 00
Hoof meal.....	1 70 @	1 75
Azotine (beef).....	1 95 @	2 00
Azotine (pork).....	1 95 @	2 00
Tankage (concentrated).....	1 65 @	1 67½
Tankage (9 and 20).....	1 70 & 10 @	1 75 & 10
Tankage (7 and 30).....	17 00 @	17 50
Fish (dry).....	20 00 @	—
Fish (acid).....	12 00 @	—

Phosphate and Fertilizer Notes.

The total shipments of Tennessee phosphate rock from the port of Pensacola for the month of August amounted to 10,432 tons.

The shell-rock quarry at the Castle Haynes phosphate mines in North Carolina is now being operated by private parties. The city of Wilmington is taking the entire output of rock, and is using it to macadamize the streets.

The steamship Pembridge cleared from Savannah on the 10th of August for Hamburg with 3750 tons of phosphate rock, and the steamer Bettor for the same port with 4600 tons, making the shipments for the month 8350 tons.

It is stated that the output of phosphate rock from the mines in Maury county, Tennessee, via Louisville & Nashville Railway from July 15 to August 15 was 69,300 tons. About 10,000 men are now engaged in Maury and Hickman counties in the phosphate fields.

The Cumberland Mining Co. was chartered last week at Nashville, Tenn., with a capital stock of \$2500. The incorporators are James J. Tinsley, T. G. Tinsley, A. O. Ledoux, T. M. Steger and Charles F. Polak. The new company will mine, dry, clean phosphate rock for market, as well as pyrites and other minerals.

A phosphate deal was closed at Columbia, Tenn., on the 2d inst. by which the farm of W. C. Sellers, consisting of 260 acres, and the Davis Harris place of ninety acres on Knob creek were transferred to the American Phosphate Co. Mr. Sellers received \$16,900 for his farm, and Mr. Harris \$9000, both in cash.

The annual meeting of the stockholders of the Tennessee Valley Fertilizer Co. was held at Florence, Ala., last week. The company has now a paid-up stock of \$20,000. It was decided to increase the output at once, and the factory will increase its capacity at once to four times the amount of fertilizer manufactured last year.

It is stated that phosphate rock has been discovered in paying quantities in Limestone county, Alabama, but nothing has been done towards developing the deposits. The locality of the deposits is some distance from the railroad. It is claimed that the rock can be shipped down Elk river to the Tennessee, and there loaded on barges for the market.

It is stated that Mr. William Turman of Waynesboro, Tenn., has discovered a phosphate bed near Mannie, Tenn. It consists of two distinct layers, one about eighteen inches thick and the other fourteen to sixteen inches thick. An area of 200 to 400 acres lie so that it may be

easily mined. The rock is similar to that of Mt. Pleasant, and is thought to be valuable.

During the present year a marked improvement has taken place in the phosphate industry of South Carolina. The demand for rock is better than it has been for some time, with shipments increasing and the output, of course, of greater volume. For the six months ending June 30, 1899, the royalty collected by the State on the basis of twenty-five cents per ton amounted to \$21,244.24, against \$12,070.25 for the corresponding period last year. The increase, it will be noted, amounts to \$9173.99. The royalty paid was distributed among the companies as follows: Coosaw Company, \$10,602.75; Central Company, \$5207.75; Beaufort Company, \$4564.85, and Empire Company, \$868.89.

American Bankers Meet.

The twenty-fifth annual convention of the American Bankers' Association met this week at Cleveland. Between 1200 and 1500 bankers, representing \$5,700,000,000 capital, were present. In his annual address President George H. Russell spoke of the larger resources of the South and West, their growing independence of the older money centers, the tendency toward lower rates of interest and the evident great wealth and prosperity of the whole country. The report of Secretary James R. Branch showed a membership of 3915 members, whose capital, surplus and undivided profits aggregate \$1,230,192,191; combined deposits, \$4,501,367,328; total, \$5,731,559,519. This is \$841,211,025 more than the same assets of last year's members. These figures do not include the capital and deposits of 372 members who are private bankers and make no statements. The convention adopted the following resolutions:

"The bankers of the United States most earnestly recommend that the Congress of the United States at its next session enact a law to more firmly and unequivocally establish the gold standard in this country by providing that the gold dollar, which under the existing law is the unit of value, shall be the standard and measure of all values in the United States; that all the obligations of the government and all paper money, including circulating notes of national banks, shall be redeemed in gold coin, and that the legal-tender notes of the United States, when paid into the treasury, shall not be reissued except upon the deposit of an equivalent amount of gold coin."

A dispatch from Knoxville says that a Boston syndicate has purchased 3000 acres of zinc lands in Knox county, and will expend \$100,000 in developing the industry.

The Shubrick, the first of the six torpedo-boats built by the Trigg Shipbuilding Co. at Richmond, Va., for the United States government, will be launched October 18.

The open-hearth furnaces of the Cumberland (Md.) Steel & Tinplate Mill are making steel shells for the United States government, each shell weighing 1350 pounds.

Permits for building operations in August at Kansas City, Mo., represent investments of more than half a million dollars.

The trial trip of the Kearsarge, the battleship completed by the Newport News Shipbuilding & Dry-Dock Co., was successful.

The annual meeting of the Southern and Southwestern Railway Club will be held at Atlanta, Ga., November 9.

[A complete operation of the Construction

LUMBER

Office

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LUMBER.

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

LUMBER MARKET REVIEWS.

Baltimore.

Office Manufacturers' Record,
Baltimore, Md., September 7.

A fairly active tone is at the moment very much in evidence in nearly every channel of the local lumber trade. As to the demand for lumber, there seems to be no decrease from that of a week ago, while in certain lines rather a better inquiry characterizes trade. Prices throughout the general list are all decidedly firm, with an advancing tendency, and during the past week considerable lumber has been moved. In North Carolina pine orders are coming in as freely as ever, and manufacturers say they have all the business they want, while there is every indication that large sales will continue throughout the fall months. In a local way yardmen are buying freely, and will likely in future keep better assorted stock instead of drawing on the manufacturer for material as required. Air-dried lumber is selling well, box boards being purchased more freely by boxmakers. The building demand is fair, and considerable business is being transacted with out-of-town parties. The white-pine trade continues very satisfactory. Stocks are not excessive, and under a fair demand prices are firm and higher. The tone of trade throughout the hardwood market is unchanged, and in ash, poplar, oak and other woods the movement is brisk. Receipts of dry lumber are light, while there is a liberal supply of green stuff. The export business is of average volume for this period of the season, and shippers are well satisfied with the outlook.

Jacksonville.

[From our own Correspondent.]

Jacksonville, Fla., September 4.

During the month of August the lumber trade of this port has been of an average volume, and the demand for lumber is active, with prices firm and higher. Buyers are anxious to get the lumber, and the mills here are overrun with orders, while each day brings additional business of a substantial character in the lumber industry. The Cummer mill goes into full operation this month, and the Bucki mill, which has been idle for some time, will shortly be running. At milling points nearby stocks are all generally light, the lumber being quickly disposed of as it is cut. During the month of August the shipments of lumber and other wood products were as follows: Pine lumber, coastwise, 8,152,423 feet; cypress, 285,000 feet; shingles, 3,152,500; cross-ties, 18,000. The foreign exports from this port in August consisted entirely of lumber, and aggregated 663,602 feet, valued at \$10,656.87. Lumber freights continue very steady, with a light offering of desirable tonnage. Rates to Baltimore are at \$5.75, Philadelphia \$6, New York \$6.25 and Sound ports \$6.25 to \$6.75. Charters last week were the schooner Thomas Winsmore, 381 tons, from Jacksonville to Philadelphia with lumber at \$6, and schooner Wanola, 272 tons, from Jacksonville to Las Palmas with lumber at \$14, United States gold, and port charges.

Mobile.

[From our own Correspondent.]

Mobile, Ala., September 4.

A steady and forward movement is now in evidence at this port, and in all directions the industrial and commercial channels are alive with an additional volume of trade. The fiscal year just closed has

developed a largely-increased trade in timber and lumber, and, in fact, shipments in every line have generally been of greater volume. The new steamship line just chartered jointly by the Horsley Steamship Co. of Great Britain, the Mobile & Ohio and the Southern Railway companies and the Mobile Steamship & Terminal Co., will be an active competitor for Southern and Western business. The shipping facilities of this port are most advantageous, and the movement in lumber and timber during the past year, as well as in grain and cotton, shows that the port is now taking its place among the most prosperous of the Gulf ports. The season of 1898-99, just closed, was the banner year in the lumber and timber trade of this port, the record of 1896-97 being exceeded by several million feet. The grand total of the lumber and timber business of the port for the past season amounted to 210,000,000 superficial feet. In the summary of the total business for the season the record of 1897-98 has been beaten in every instance, showing an increase of about 52 per cent. About 80,000,000 feet of lumber and timber were shipped to the United Kingdom, but in lumber alone the Argentine Republic took 18,000,000 feet, while Cuba took 15,000,000 feet. The exports of hardwoods showed a remarkable increase over last season. With the increase in the lumber and timber trade staves were handled in larger quantities than for many years past, the total shipments amounting to 502,400, valued at \$61,428. The general showing for the trade of the port is very satisfactory, and the outlook for a larger increase in business during the present season is decidedly encouraging.

Beaumont.

[From our own Correspondent.]

Beaumont, Texas, September 4.

The saw mills in this section are now enjoying an era of prosperity hitherto unknown, and there seems to be no let-up to the demand for lumber and other wood products. The improvement in the lumber trade in Southeast Texas and Western Louisiana has been uninterrupted since the 1st of January last; prices have advanced sharply, a number of new mills have been built and the capacity of old saw-mill plants increased, and at the moment the demand is most pronounced, buyers taking lumber readily at list figures. The demand is good from the Northwest, and from New York and Boston there are numerous inquiries for lumber. The mills here are particular as to what orders they will accept and fill promptly, and are working hard to execute orders already on file. At Orange all the mills are busy, 923 cars of lumber having left the mills during the month of August, against 816 cars in August, 1898. The demand from dealers throughout the State is brisk, and from Kansas, Nebraska, Oklahoma and the Indian Territory there is a good volume of business recorded. The export business through Sabine Pass is only moderate, on account of the advance in freight rates, the principal business being with Vera Cruz and Tampico, while there is some business doing with the United Kingdom and continental ports. Rates to Europe are much higher than for the same date last year. Recent charters have been made at 130s. per standard, and last year tonnage was easily secured at 110s. to 115s. per standard. The big steamer Medrino arrived on the 26th ult. at the Pass, and is loading for Rotterdam, the cargo being furnished by Capt. Robert Morgan of Orange. Her cargo will comprise very select shipments of prime lumber and a lot of choice sawn timber. The work on the Southern Pacific terminal at Sabine Pass is approaching completion, and will

very soon furnish a car capacity for 1500 cars; the sheds and offices have been completed and everything put in shape to handle freight with the greatest promptness and dispatch.

Lumber Notes.

The Oxley Stave Co. at Attalla, Ala., is erecting a stave mill on its old site in that town.

The Dickinson Lumber Co. of Norfolk, Va., has leased the H. A. Rankin planing mill at Fayetteville, N. C., and will enlarge and operate it.

The Stafford Cooperage Co. was incorporated at Louisville, Ky., last week, with a capital of \$10,000. The incorporators are J. R., R. J. and W. D. Stafford.

Messrs. Britton & Johnson of Fayetteville, N. C., have purchased the Jack Davis timber on Big Rockfish, in Cumberland and Robeson counties, consisting of 2500 acres, for the sum of \$7000.

The Edgefield & Nashville Manufacturing Co. of Nashville, Tenn., will rebuild its furniture factory, recently reported burned. The new building will be of brick, 250x60 feet, four stories, and will cost \$10,000.

A contract has been entered into between the Bradley-Ramsey Lumber Co. of Lake Charles, La., and Jackson Church of Michigan, by which the latter party agrees to erect for the lumber company a new slab burner.

The saw mill of J. L. Duval & Co. of Petersburg, Va., situated in Prince George county, with standing timber of 964 acres, was sold at public auction on the 1st inst. Mr. William R. McKenney of Petersburg was the purchaser at \$2225.

The export firm of L. W. & P. Armstrong of New York has bought for San Juan, Porto Rico, a planing and saw-mill plant. The order for the power plant was secured by Edward Hampton & Co., and that of the woodworking machinery by the J. A. Fay & Egan Co.

The White Patent Axle & Hub Co. has been incorporated at Wilmington, N. C., for the manufacture of the White patent axles, spindles, buggies, wagons, etc. The capital stock is \$14,000. The incorporators are Franklin B. White, John B. Mercer, B. F. Keith and Isaac Hogeland.

The exports of wood products from the port of Pensacola, Fla., for the month of August, as reported by the collector of customs, were as follows: Timber and lumber 36,711,000 superficial feet, oak lumber 165,000 feet, whitewood 20,000 feet, walnut lumber 35,000 feet and oak staves 84,590.

It is stated that Hon. John T. Kirby, general manager of the Gulf, Beaumont & Kansas City Railway, has purchased the timber from twenty-one sections of yellow-pine land in San Augustin and Sabine counties, Texas. Mr. Kirby will build a railroad and saw mill in the near future to clear this immense tract of timber.

The Globe Lumber Co., formerly known as the Yellow Pine Lumber Co., situated at Yellowpine, thirty miles east of Shreveport, La., on Lake Bistineau, lost by fire on the 27th ult. its saw mill, four buildings and locomotive and two cars. The planing mill was saved. The cost of the entire plant was \$180,000, with loss estimated at \$50,000 and insurance carried \$55,000.

The Houston Lumber Exchange was incorporated recently at Houston, Texas. The following board of directors were selected to act during the first year of the organization: S. F. Carter of the Emporia Lumber Co., J. L. Campbell of the J. L. Campbell Company, J. M. Rockwell

of the M. T. Jones Lumber Co., A. J. Schureman of Schureman & Fall, M. L. Wormack of the Trinity Lumber Co., E. H. Harrell of L. B. Menefee & Co., and W. H. Norris of the Norris Lumber Co.

The R. W. Hinton Company, successors to Hinton & Barnes of Lumberton, Miss., completed its organization on the 26th ult. Mr. R. W. Hinton was elected president, and H. C. Yawn, secretary and treasurer. The board of directors is as follows: R. W. Hinton, H. C. Yawn, H. H. Folk, J. H. Hinton, A. S. Hinton and H. A. Camp. The authorized capital of the company is \$50,000. The company will operate a large saw mill, turpentine orchards and plants and a large mercantile business.

The Kansas City Star says "lumber dealers of that city report that an enormous order for Southern yellow pine, the largest single order in the history of the lumber trade, is pending. Some of them and freight officials of interested railways understand that the negotiations are ended and that mills along the Kansas City, Pittsburg & Gulf Railway and other lines are now under contract to fill the order. It is for 500,000,000 feet of lumber for use in the construction of Cecil Rhodes' Cape to Cairo road in Africa, and to supply this demand it will keep twenty large mills busy for two years."

It is stated that the Acme Tea Chest Co. of Glasgow, Scotland, has decided to locate its headquarters for America in the city of Wilmington, N. C. The company has selected Wilmington as being accessible to a good supply of gum and other woods such as are used in veneering for the manufacture of tea chests. Large quantities of land along the east bank of the Cape Fear river, in Bladen and Pender counties, has been purchased, sufficient to give the company a supply of timber for some years to come. The purchase is said to aggregate 10,000 acres, with about 75,000,000 feet of stumpage. The company will have a steamer, due November 1, to load for Glasgow, and other steamers to follow every sixty days as business progresses. A lease of the old Cape Fear & Yadkin Valley terminal at Point Peter has been taken, and the company will begin cutting logs for shipment at once.

During the past ten months 14,852 head of cattle have been shipped to Cuba by way of Tampa, Fla. Their value to cattlemen is estimated at \$222,780. These exports have been a substantial addition to the business of Tampa.

It is estimated that the increase of the wholesale trade at St. Louis in 1899 will amount to \$48,000,000 over that of 1898. This increase partly includes the increase in manufactured products, amounting to \$50,000,000.

During August 124 permits were issued at St. Louis for brick buildings to cost \$372,000; eighty-nine for frame buildings to cost \$24,621, and for repairs and alteration to cost \$45,200.

The Black Mountain Coal Co., to develop coal and mineral lands in Lee county, Virginia, has been incorporated by George L. Carter and others, with a capital of \$100,000.

During the week ended September 2 the output in the Jeplin (Mo.) district amounted to 8,908,330 pounds of zinc and 1,209,410 pounds of lead, valued in all at \$195,159.

Preparations are making for an industrial convention at Dallas, Texas, on October 20 and 21.

Coal has been discovered near Laverder, Ga.

COTTONSEED OIL.

This department is open for the full and free discussion of trade topics and practical questions, and contributions are invited from men who are identified with this industry. Items of news are always acceptable.

The Market for Cottonseed Products.

New York, N. Y., September 6.

Trading in the cotton-oil market is slow, and conditions with regard to their bearing on new-crop-oil prospects are becoming more emphasized. The element of speculation and the influence which current prices for oil exert on seed values are at work. The standing of the market, so far as it concerns spot oil or old oil in any position, is about the same as a week ago. Prices are steady to firm, and summer trading is being carried on on a moderate scale. The new-crop-oil season opens this month, and it looks as if the entire market will be well cleaned up of old oil. Interest in new oil is therefore keen and widening as the summer season closes. The lard market, ever fluctuating, is lower than a week ago, October deliveries being quoted at 5.22½ cents, Chicago. Tallow is firmer, and is quoted at 4½ cents, Chicago, the tendency being decidedly upward. This latter feature places cotton oil in the position of being the cheapest soap ingredient available. Consumers of cotton oil who have large needs are figuring for supplies, and during the past week have been able, it is reported, to secure considerable lots for October delivery at a shade lower than former week's figures, or at 15½ to 16 cents loose at mills in Texas, and the valley 17½ to 18 cents for September delivery. While a number of mills have sold well ahead, both with regard to oil and meal, not a few have so far refrained in this respect, not caring to go short on seed while present doubtful conditions prevail. Concerning future operations, it is current here that a Louisville refinery recently engaged 25,000 barrels freight room from Newport News or Norfolk to Hamburg at 80 to 85 cents per barrel for 5000 barrels per month, commencing in October and terminating in February. There is considerable enquiry for new-crop oil from abroad, but as much as two cents of a difference exists in the views of buyers and sellers. Buyers want to purchase at as low a figure as last year, disregarding the changed conditions, but no crushers that we know of have been willing to contract on the terms offered. The reported reduction of 25 per cent. in late estimates of the cotton crop has undoubtedly affected the views of holders, inasmuch as it checks offerings. Winter yellow is offering at 28 cents, October, and white at 27 cents, and one cent more spot delivery. The following are closing prices: Summer yellow, prime, 24 to 25½ cents; summer, bleaching, 26 cents; summer, off grades, 23 to 24¼ cents; yellow, butter grades, 27 to 28 cents; white, 27 to 29 cents; winter yellow, 28 to 29 cents; salad oil, 29 to 30 cents. Advices from the United Kingdom are to the effect that a steady market prevails for refined Liverpool and Hull at 10s. 9d. Forward deliveries of off oil are offered here at 23½ cents, and 22 cents at New Orleans.

Cottonseed-Oil Notes.

The company lately reported to be organized by W. F. Cox at Anderson, S. C., for the establishment of a cottonseed-oil mill will be known as the Excelsior Cottonseed Oil Co.

The Dublin Cottonseed Oil Mill at Dublin, Texas, has been undergoing repairs, and is now in first-class condition, only awaiting a good supply of seed to com-

mence crushing. The compress is ready and waiting for cotton.

At a meeting of the stockholders of the Summit Gin & Improvement Co., held last week at Summit, Miss., it was decided to issue sufficient new stock at par to erect a two-press cottonseed-oil mill. Subscriptions to the amount of \$11,000 were taken, work on the mill to commence in a few days and the machinery purchased as soon as decided upon.

The cottonseed-oil mills at Houston, Texas, for some time past have been preparing for the opening of the crushing season, which opened on Monday last. Receipts of cottonseed have been quite liberal during the past week, and mills will have a good stock on which to commence operations. The National, the Southern and the Merchants and Planters' mills commenced work last Tuesday, giving employment to about 600 men at the start.

The movement in cottonseed products for the fiscal year of 1898-99 was one of considerable activity, the crush for the year amounting to 112,000 tons of seed. The New Orleans Times-Democrat in its special edition gives the course of the market for the year and says: "The following were the local quotations during the under-named years: 1898-99, cottonseed \$5 to \$9 per ton, cake \$18.50 to \$20 per ton for export, meal \$18 to \$20 per ton for export, crude oil 12 to 17½ cents per gallon, refined oil 19¼ to 25 cents per gallon; 1897-98, cottonseed \$5 to \$8 per ton, cake \$18.50 to \$20.50 per ton for export, meal \$18.50 to \$20.50 per ton for export, crude oil 17 to 22½ cents per gallon, refined oil 21 to 23½ cents per gallon; 1896-97, cottonseed \$7 to \$8 per ton, cake \$17.25 to \$20.50 per ton for export, meal \$17.25 to \$20.50 per ton for export, crude oil 17 to 22½ cents per gallon, refined oil 22 to 26 cents per gallon." The foreign exports of cottonseed products were as follows: Oil 161,088 barrels, cake 1,802,000 sacks, meal 2,046,000 sacks and soap stock 10,046 barrels. Coastwise exports were, oil 17,898 barrels, cake 28,000

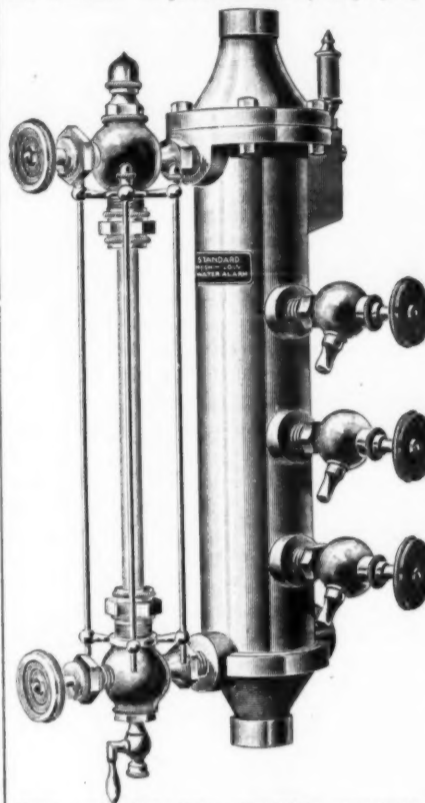
sacks, meal 44,000 sacks and soap stock 150 barrels.

The Greensboro (N. C.) Industrial and Immigration Association has elected J. W. Fry, president; E. P. Wharton and M. L. Shields, vice-presidents; S. H. Boyd, secretary and treasurer; Neil Ellington, J. N. Wills, W. E. Beville, J. S. Hunter, C. E. Holton, C. G. Wright and F. A. MacDonald, directors.

MECHANICAL.

A Perfect Water Column.

What the safety valve is to the steam the water column is to the water. Our illustration shows the "Standard" water column. This column insists on water being carried at a uniform level. When water reaches the danger limits it sounds the whistle. It protects boiler, employer,



THE "STANDARD" WATER COLUMN.

employees, life and property. It at all times, day and night, insures attention. Takes the place of an ordinary column. The assurance that it affords is well worth the cost. In carrying water low in the boiler to save fuel and gain steam space it affords safety. Explosions, leaky tubes, burnt crown sheets, burst engine cylinders avoided when there is a "Stand-

These gauges are equipped with the seamless copper float, guaranteed to stand a working pressure of 300 pounds to the square inch without leaking or collapsing.

The valve is upright and readily drains itself, so that there is no danger of sediment settling around the valve and seat, thereby causing it to leak. Everything about the valve motion is as simple as can be made.

If you want further information address the maker, Standard Gauge & Manufacturing Co., Cleveland, Ohio.

Modern Turbines.

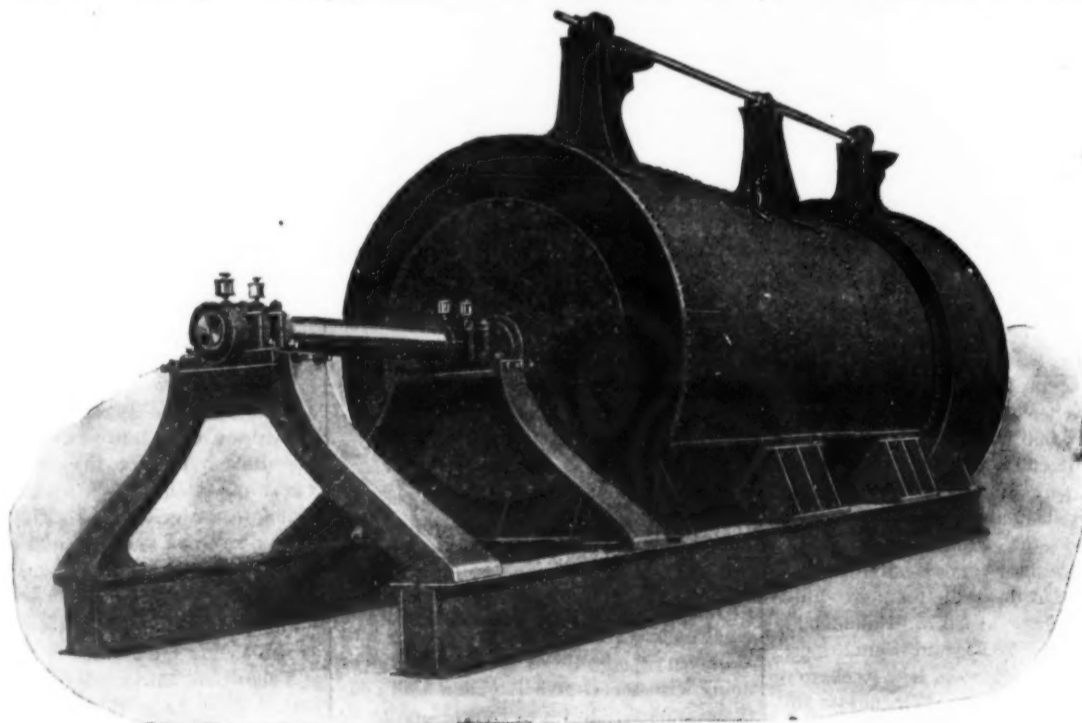
For many years users of water-power for manufacturing purposes have utilized the turbine wheel. Various forms of this water wheel have been introduced to the industrial world from time to time, and those have found the widest usage that came nearest to supplying that perfection of operation which the manufacturer aimed at securing.

One of the first turbines introduced, and since its introduction one of the most successful, is that originally devised and patented by Mr. N. F. Burnham in 1859, and which has been improved from year to year as experience found necessary and modern machinery and methods made possible.

Messrs. Norrish, Burnham & Co. of Glen Rock, Pa., are the manufacturers of the turbine in question, and their claim is that whilst each successive wheel was equal to any other in the market in its day, that their new improved "Standard" turbine is superior to all other wheels.

Every part is constructed in the best manner by the most skillful mechanics, the adjustments are perfect, and each piece of the wheel and case proportioned to the work it is intended to perform, thus securing a whole whose simplicity of construction, durability, complete workmanship and economy in the use of water is unexcelled. Such are the further claims of the makers.

As a specimen of Norrish, Burnham & Co.'s product we present an illustration of a pair of 54-inch turbines, mounted hori-



54-INCH BURNHAM TURBINES.

and" safety high and low water alarm attached to the boiler.

The operation is very simple, and at the same time positive. The two links attached to main lever, one above and one below, come in contact with collars on valve stem, causing same to open valve whenever lever is raised or lowered by the float coming in contact with same from the bottom, or the collar on float rod coming in contact with lever from the top.

zontally in wrought-iron flume, having inlet at end and central discharge through cast-iron draft box. These wheels were made in this style to operate under a low head of water, and are developing 300 horse-power for a Vermont company, which has since put in a pair of 42-inch turbines of the same type developing 222 horse-power.

Parties desiring further information may address the manufacturers as above.

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CONSTRUCTION DEPARTMENT.

THE MANUFACTURERS' RECORD seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with everyone interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

*Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery Wanted." In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the Manufacturers' Record.

It often occurs that the organization of a new company in a town is not known by the postmaster, and hence letters addressed to the company are returned marked "not known." The Manufacturers' Record reports the first organization of all companies, and our readers, in seeking to get into communication with them, should be very careful in deciding how to address them, and it is often advisable to add the names of one or more incorporators as an aid to the postmaster in delivering mail.

ALABAMA.

Anniston—Pipe Works.—D. R. P. Dimmick has gone to Pennsylvania for the purpose of perfecting the organization of a company that contemplates the erection of a large pipe plant to cost \$250,000 in the Anniston district.

Attalla—Cotton Gins.—J. T. Noofin will install two new cotton gins.

Attalla—Stave Mill.—The Oxley Stave Co. is erecting a new stave mill.

Bessemer—Rolling Mill.—The Bessemer Rolling Mill Co. will be reorganized and resume operations, as lately reported. Address Morris Adler, Birmingham, Ala.

Birmingham—Iron Furnace.—The Republic Iron & Steel Co. will construct, it is reported, a third furnace at Thomas, to be 18x80 feet, with capacity of 200 tons of iron per day; W. H. Hassinger, manager Southern district. The two furnaces at Thomas are now in blast; other extensive improvements in this line are also planned.

Blanche—Iron Ore.—C. E. Buck of Richmond, Va., has purchased the Blanche ore mines and the Dickson mines at Dickson, Ga. Mr. Buck has an office in the Citizens' Bank & Trust Co.'s building, Broad street, Chattanooga, Tenn.

Ensley—Ice Factory.—It is reported that New Orleans parties have completed arrangements for the establishment of an ice factory at Ensley.

Florence—Refrigerating Plant.—The Chapin Ice, Coal & Cold Storage Co. will install a new plant, as reported last week; capacity not fully decided upon.

Florence—Fertilizer Factory.—The Tennessee Valley Fertilizer Co., Lee Ashcraft, superintendent, has increased capital \$65,000 to increase the capacity of its plant.

Florence—Cotton Mill, etc.—The Florence Cotton Mills (lately reported as incorporated for establishment of 3000-spindle and 100-loom mill) will consolidate with the Florence Cottonseed Oil Mill and operate under one management; cotton mill to be erected adjoining the oil mill, which will soon be in operation; the new company has already completed arrangements for a round-bale gin. Company has a paid-up capital of \$70,000 and an authorized capital of \$100,000.

Montgomery—Ice, etc., Factory.—Thomas H. Moore, William A. Gayle, John R. Kelly, C. Armstrong and others have incorporated the Cuban Ice Manufacturing Co., with a capital stock of \$50,000, for the purpose of manufacturing artificial ice, soda water, mineral water, to erect and maintain cold-storage plant, etc.

Piedmont—Silver and Zinc Lands.—New York parties have purchased property adjacent to Piedmont from E. D. McClelen on which has been discovered silver and zinc, and will in all probability develop extensively.

Sylacauga—Cotton Mill.—The McDonald Cotton Mills, reported last week as to erect a 10,000-spindle plant, has purchased site and all machinery except engine and boiler and other accompanying machinery; company will be ready to receive bids for erection as soon as plans and specifications are completed.*

Trussville—Iron Furnace.—Henry W. Perry, Tunstall B. Perry and Robert D. Smith have incorporated the Trussville Furnace, Mining & Manufacturing Co., with a capital stock of \$250,000, to conduct a general mining and manufacturing business; company will operate the blast furnace at Trussville, and is preparing it for blast; principal office of company, Birmingham.

ARKANSAS.

Boonsboro—Telephone Company.—The Boonsboro & Stillwell Telephone Co. has been incorporated, with J. C. White, president; J. A. Robinson, vice-president; A. R. Carroll, secretary, and J. S. Edmiston, treasurer; capital stock \$2500.

Little Rock—Chair, etc., Factory.—The Arkansas Brick & Manufacturing Co. has organized a company for the manufacture of chairs and chair stock, etc. Address W. W. Dickinson, president.

Little Rock—Fuel Company.—The Pulaski Fuel Co. has been incorporated, with a capital stock of \$10,000, by W. L. Reaves, president; M. D. L. Cook, vice-president; Hall C. McConnell, secretary, and E. T. Reaves, treasurer.

FLORIDA.

Fort White—Phosphate Mines and Plant.—C. B. Meerselliott of Des Moines, Iowa, has purchased phosphate land near Fort White, and will develop and erect plant.

Jacksonville—Naval Stores and Commission Company.—Chartered: The Florida Naval Stores & Commission Co., with a capital stock of \$150,000.

Leroy County—Phosphate Mines and Plant. H. G. Hazard of Ocala, Fla., has purchased and will develop phosphate lands in Leroy county, erecting a plant.

Ocala—Turpentine Still, etc.—Hinson & Son have leased 10,000 acres of pine timber land for \$15,000 and will erect large turpentine still.

Punta Gorda—Ice and Power Company.—The Punta Gorda Ice & Power Co. has increased its capital stock to \$35,000.

Sanford.—C. W. Kennon & Co. of Tampa will establish a branch plant at Sanford to cut their patent palmetto sheathing and a wood preservative factory, as recently reported, the latter plant having already been established. Address Box 517.

Stetson—Cassava Factory.—H. R. Wardell of New York city is arranging to put in order and operate the cassava factory at Stetson. He will increase capacity of factory and possibly erect another factory.

Tallahassee—Real Estate.—The Woodlawn Cemetery Association has been incorporated, with a capital stock of \$10,000, by Geo. W. Clark, G. A. Clark and T. M. Burnes.

Tampa—Cement Factory.—It is reported that New York capitalists will organize a company for the establishment of a large cement plant in Tampa. W. R. Fuller can be addressed for information.

GEORGIA.

Atlanta—Viaduct.—Alderman I. S. Mitchell will introduce a resolution in the city council authorizing the acceptance of the \$50,000 offered by the Collins Park & Belt Railroad Co. towards the construction of the proposed Whitehall-street viaduct.

Augusta—Ice Factory.—The Interstate Cotton Oil Co. has awarded contract for doubling the capacity of its ice factory.

Auraria—Gold Mines, etc.—F. C. Bogart and W. M. Keady of Dahlonega (lately re-

ported as having purchased the Hargrove gold mine and as to erect 10-stamp mill) have, with Z. B. Hargrove, organized the Henrietta Gold Mining Co.

Cedartown—Cotton Mill, etc.—The Cedartown Cotton Manufacturing Co., lately reported as incorporated, etc., was the old original plant, and bought in April the Paragon Mill. A consolidation was then made of all the mill plants, warehouses and gin under the name of the Cedartown Cotton Co.; company intends to fill the Paragon, and order has been placed for the additional 7500 spindles; building was prepared for this additional machinery, and when it has all been installed 9000 spindles will be added to plant No. 1 (the old Cedartown Cotton Manufacturing Co. mill); this will mean new building and everything in connection with it except motive power. It is also true, as reported, that Philadelphia (Pa.) parties are organizing to build a 10,000-spindle mill, which, when completed, the Cedartown Company will lease; this, however, is not as yet a certainty; J. Wright Adamson, secretary, P. O. Box "O."

Dalton—Electric-light Plant.—Franchise has been granted to Dr. John W. Green of Tilton, Ga., for erection of an electric-light plant at Dalton.

Dickson.—See item under "Blanche, Ala."

Durham—Coal Mines, Coke Ovens, etc.—C. E. James, J. R. Rice, Eugene Thomason, D. U. Crockett of Chattanooga, Tenn., and Gordon Lee of Chickamauga, Ga., have purchased the Durham coal mines at Durham. These parties recently purchased the property of the Dillon Mining Co., both properties located on Lookout mountain, and will consolidate the properties and incorporate the Durham Coal & Coke Co., with a capital stock of \$300,000, to operate them. Output of mines will be doubled and 100 new coke ovens erected, making 300 in all; 150 additional operatives will be employed. This item was published during the week under Chickamauga, Ga., the principal office of the company.

Fitzgerald—Publishing.—Chartered: The Fitzgerald Publishing Co., to publish the Fitzgerald Leader and the Ocala Dispatch; F. S. Bander, president.

Florence—Cotton Mill.—Capt. W. H. Day is endeavoring to organize a company for the establishment of a 10,000-spindle cotton mill to cost \$135,000.

Milledgeville—Electric-power Plant.—J. F. Wilson and associates, reported last week as to expend \$400,000 in developing Fruman's Shoals water-power, etc., states that a company is being organized to build an electric-power plant for the development of the Fruman Shoals property. It is proposed to develop 5000 horse-power and transmit power for operating cotton and other factories.

Newnan—Cotton Mill.—The Newnan Cotton Mills (reported last week) will increase its plant from 6280 to 10,000 spindles, adding to its building eighty-eight feet; will also erect office and warehouse, and will increase power plant; machinery nearly all contracted for; J. P. Lovejoy, secretary.

Savannah—Canning Factory.—The establishment of a canning factory is contemplated. Address M. J. Solomons, secretary-treasurer, Chatham Real Estate & Improvement Co.*

Waycross—Electric-power Plant.—The Sattila Manufacturing Co. will erect a new brick dynamo-house and install a 500-horse-power Corliss engine for increasing its plant so that it will be able to operate all the machinery in its planing mill, as well as other machinery in the city, by electricity; it is also stated the company will install another ice machine.

Zeigler—Turpentine Still.—Walker & Zeigler will erect a turpentine still.

KENTUCKY.

Barboursville—Telephone System.—J. W. Hunter of Chattanooga, Tenn., secretary of the East Tennessee Telephone Co., has received franchise for construction of telephone system at Barboursville.

Coalport—Coal Mines.—The Jellico Coal Co. has increased its capital stock from \$45,000 to \$75,000, and is installing compressed air mining machines and rope haulage; will ship 500 tons of coal per day when machinery is in position; Fred. G. Tice, secretary.

Cynthiana—Telephone Company.—The

Cynthiana Telephone Co. will increase its capital stock from \$2100 to \$3600.

Flemingsburg—Telephone System.—The Flemingsburg Telephone Co. has been incorporated by J. H. Powell, J. M. Baldwin and others; capital stock \$2500.

Frankfort—Cold-storage Plant.—The Lexington Brewing Co., Lexington, Ky., will erect a cold-storage plant at Frankfort.

Lexington—Cold-storage Plant.—The Cincinnati Butchers' Supply Co. has contracted for the erection of a cold-storage plant to cost \$5000.

Louisville—Foundry.—The National Foundry & Machine Co. will rebuild its plant reported burned; loss on burned plant \$20,000.

Louisville—Cooperage.—Chartered: The Stafford Cooperage Co., by J. R. Stafford, R. J. Stafford and W. D. Stafford; capital stock \$10,000.

Louisville—Soda and Glycerine Plant.—The Kentucky Refining Co. will erect a four-story brick plant to cost \$10,000, 100x226 feet, for the manufacture of caustic soda and glycerine from the by-products of its oil refinery; when completed and equipped will represent expenditure of \$100,000; Fred Erhart, architect.

Madisonville—Mining Plant.—The Reinecke mining plant has been improved at a cost of \$30,000; new machinery installed includes four boilers, an electric dynamo, an engine for propelling it, an electric locomotive and a double elevator; I. Bailey, manager.

Madisonville—Wagon Factory.—J. W. Patterson has established a wagon factory.

Middlesborough—Pulp Mill.—J. J. Headley & Co. of Anderson, Ind., are investigating with a view of establishing a pulp mill in Middlesborough.

Middlesborough—Steel Plant.—It is reported that the Watts steel plant, now owned by the Virginia Coal, Iron & Coke Co. (of New York), will be repaired and put in operation.

Perryville—Telephone System.—The Boyle Citizens' Telephone Co. (lately reported under Danville as incorporated) has about twenty-four miles of telephone line now in operation, and will extend its system over seven or eight counties. C. R. McDowell, Danville, Ky., is one of the incorporators.

Rock Haven—Saw Mill.—L. T. Dickason & Co., M. L. Gould, manager, is erecting a saw mill, as reported last week, but is not installing four new steam drills.

LOUISIANA.

Esterwood—Rice Mill.—William Miller of Des Moines, Iowa; Frank A. Combes of Cleveland, Ohio, and James F. Morris of Crowley, La., have incorporated the Esterwood Rice Mill Co., Limited, with a capital stock of \$30,000 for the erection of the 800-barrel rice mill previously reported to be erected by the Miller-Morris Canal Co.

New Iberia—Electric-light Plant and Water Works.—The city will issue bonds for erection of an electric-light plant and construction of water works. Address "The Mayor."

New Iberia—Canal.—A canal will be constructed from New Iberia to Vermillion bay. Address "The Mayor."

New Orleans—Mercantile.—Herman Meader, Louis J. Meader, Bernard Grehan and others have incorporated as Herman Meader, Limited, to conduct a grocery; capital stock \$50,000.

New Orleans—Plumbing, etc.—Ernest Gogreve, Henry Bentz, William A. Gogreve and others have incorporated as A. Schaffenburg Co., Limited, with a capital stock of \$10,000, for plumbing, gas, steam and hot-water fittings, installation of electric wires and apparatus.

New Orleans—Cotton Mill.—Louis Kohlmann has leased the old Semmes & Parker mill building; will improve same at a cost of \$4500, and put same in operation as a cotton factory; will operate 2400 spindles at the start.

Yellowpine—Lumber Mill.—The Yellow Pine Lumber Co. will rebuild its plant reported burned; loss on plant \$50,000.

MARYLAND.

Baltimore—Ginger-ale Factory.—The Gosman Ginger Ale Co. will vote on a proposition of the directors to increase its capital stock \$50,000.

Baltimore—Construction Company.—J. L. Blackwell and others have incorporated the

J. L. Blackwell Company for the construction and equipment of railroads, etc.; capital stock \$100,000.

Baltimore—Specialty Company.—The American Art & Specialty Co. has been incorporated, with a capital stock of \$50,000, by John T. Barclay, Willard G. Day, Raymond M. Glaken, C. R., John and Walter S. Abrahams.

Baltimore—Picture-frame and Molding Factory.—Furst Bros. & Co. will increase their plant by the addition of a mill for cutting frames and running moldings; purchased lot and building for \$8000, and will reconstruct for mill purposes and install improved machinery; new boilers and engines have already been installed.

Washington County—Evaporating Plant.—J. W. Thorn & Co. of Philadelphia, Pa., will establish an evaporating plant in Washington county to employ 100 operatives.

MISSISSIPPI.

Corinth—Ice Factory.—The Corinth Coal & Ice Co. is enlarging its ice plant by the addition of a 10-ton machine; contract awarded.

Brooksville—Cotton Compress.—The Brooksville Ginnery & Round Bale Compress Co. has been organized, with a capital stock of \$5000, by E. Cohn of Meridian, Miss., for the establishment of a cotton compress and ginnery.

Clarksdale.—Chartered: The Leflore Hardwood Co., with a capital stock of \$76,000, by John K. Stack, William S. King and R. B. Stack.

Lumberton—Saw Mill, etc.—The R. W. Hinton Co. has been incorporated, with an authorized capital of \$50,000, and will embrace the large mercantile interests, the turpentine orchards and plants, one large saw mill and livery business formerly conducted by Hinton & Barnes; R. W. Hinton, president, and H. C. Yawn, secretary-treasurer.

Magnolia—Rice Mill.—The Magnolia Gin & Light Co. contemplates installing rice-cleaning machinery.*

Okolona—Cotton Factory.—The Okolona Cotton Mills has been incorporated, with capital stock of \$65,000, by T. L. Bramlet, R. W. Chandler, E. J. Ezell and others.

Pass Christian—Ice Factory.—The Pass Packing Co. (previously reported) has awarded contract for the installation of a 10-ton refrigerating machine.

Summit—Cotton-oil Mill.—The Summit Gin & Improvement Co. has increased capital \$15,000 to erect a two-press cottonseed-oil mill in connection with its ginnery.*

Vicksburg—Drug Company.—The Keefe Drug Co. has been incorporated, with a capital stock of \$50,000, by Patrick H. Keefe and others.

Vicksburg—Cotton Mill.—A stock company will be organized for the establishment of a cotton mill. Address "Secretary Board of Trade."

West Point—Cotton Compress.—The West Point Cotton Compress Co. (lately reported as incorporated) is installing a 90-inch Morse press. Address S. L. Heath.

MISSOURI.

Bolivar—Publishing.—Chartered: The Bolivar Herald Publishing Co., with a capital stock of \$2750, by C. B. Lyman and others.

Carthage—Implement Company.—Chartered: The Schuler-Tuttle Implement Co., with a capital stock of \$5000, by W. S. Schuler, J. C. Tuttle and S. O. Morrow.

Carthage—Lead and Zinc Mines.—W. E. McCully, W. D. Leeper, J. R. Lyell and others have incorporated the Oakland Mining & Milling Co., with a capital stock of \$105,000.

Joplin—Lead and Zinc Mines, etc.—The Empire Zinc Co. has sold its Kohinoor tract of 200 acres to an Eastern syndicate, organized by J. W. Ground of Carthage, for \$260,000. It is said that ten concentrating plants are now in operation on the property, and developments are making that will lead to the building of others this fall.

Joplin—Mining Plant.—The Boston-Springfield Company has awarded contract to Guy H. Elmore for the erection of a large tailing and sludge mill on its 160-acre tract of land; mill will have twelve sets of independent rolls and fifteen sludge tables, and cost \$22,500.

Kansas City—Telephone Company.—B. F. Burd, G. V. Ross, W. C. Allen and others have incorporated the Kansas City Mutual Telephone Co., with a capital stock of \$500,000.

Kansas City—Syrup and Preserve Company.—Chartered: The Rock Syrup & Preserve Co., with a capital stock of \$3000, by J. and I. Flora and others.

Kansas City—Construction Company.—The Leavenworth Construction Co. has been incorporated, with a capital stock of \$200,000, by H. W. Wolcott, H. G. Port, W. E. Winner and others.

Mexico—Lead and Zinc Mines.—The Mexico & Joplin Land Co. has been incorporated, with a capital stock of \$150,000, by W. S. Crane, C. D. Rogers, W. W. Fry and others.

St. Joseph—Publishing.—Chartered: The Volksblatt Publishing Co., with a capital stock of \$10,000, by E. V. Harding, J. G. Schneider and others.

St. Louis.—Chartered: The Red Cross Insole Co., with a capital stock of \$6000, by Henry H. Summa, Joseph Jacque, Chas. F. Melsner and others.

St. Louis.—Chartered: The Jefferson Avenue Livery and Boarding Stables, with a capital stock of \$5000, by Frederick W. Evers, James A. Tobin, Francis J. Sharkey and others.

St. Louis—Shoe Company.—The John Meier Shoe Co. has been chartered, with a capital stock of \$100,000, by John Meier, George A. Berry and E. J. Meier.

Webb City—Lead and Zinc Mines.—The Eastern Star Mining Co. has been incorporated, with a capital stock of \$5000, by Cordell Humphreys, John Albert and Edward Smith.

NORTH CAROLINA.

Conetoe—Truck-package Factory.—The Conetoe Manufacturing Co. will erect a truck-package factory and ginnery, including cotton-house 20x28 feet, ginnery 21x40 feet, seedhouse 18x28 feet, boiler-house 25x35 feet, barrel factory, two stories, 35x75 feet, with capacity of 2000 barrels per day; cost of plant \$10,000; Claude Wilson, manager.*

Fayetteville—Saw and Planing Mill.—W. J. Sikes has established a saw and planing mill.

Fayetteville—Planing Mill.—The Hickinson Lumber Co. of Norfolk has leased the H. A. Rankin planing mill at Fayetteville and will enlarge and operate it.

Goldsboro—Cotton Company.—W. K. Parker has organized the Parker Cotton Co. to deal in cotton.

Monroe—Water Works.—J. S. Moore of Atlanta, Ga., has secured contract for construction of the proposed water-works system at Monroe.

New Berne—Oil Mill and Fertilizer Factory.—The New Berne Cottonseed Oil & Fertilizer Co. has increased the capacity of its mills by enlargement of buildings and installation of additional machinery; a water tank with 10,000 gallons capacity has also been erected and a brick office and by the first of January a complete fertilizer factory will be established.

Pilot Mountain—Tobacco Factory.—Dodson Bros. will rebuild their tobacco factory, recently burned.

Raleigh—Ice Factory.—Contract has been awarded for machinery for the ice factory previously mentioned to be erected by Forbes & Co. of Richmond, Va. E. L. Harris will be manager.

Raleigh—Telephone Lines.—The Mebane-Ridgeway Telephone Co. has been incorporated to construct lines in Alamance, Person, Durham, Orange and Caswell counties.

Raleigh—Laundry.—B. W. Baker has purchased the Excelsior Steam Laundry, as reported last week, and is increasing capacity, installing a 20-horse-power boiler and other machinery.

Scotland Neck—Peanut Factory.—Efforts are being made for the establishment of a peanut factory. Address R. C. Josey.*

Waynesville—Ice Factory.—R. H. Dykers will erect an ice factory.*

Wilmington—Tea-chest Factory.—The Acme Tea Chest Co. of Glasgow, Scotland, will locate its headquarters for America at Wilmington; company has purchased, through its local manager, Will T. Miller of Memphis, Tenn., about 10,000 acres of timber lands in Bladen and Pender counties, and will begin at once to cut logs; company expects to establish tea-chest factory in Wilmington in the near future. Address for particulars Mr. Miller.

Wilmington—Axle, etc., Factory.—The White Patent Axle & Hub Co. has been incorporated for the manufacture of the White patent axles, spindles, buggies, wagons, etc., capital stock \$14,000, by Franklin P. White, John B. Mercer, B. F. Keith and Isaac Hogeland.

Winston—Ice Factory.—D. H. King will increase the capacity of his ice factory to forty tons per day; will want plans for cold-storage room of 200 tons capacity, swimming pool 30x100 feet, also skating rink 100x150 feet.*

SOUTH CAROLINA.

Anderson—Yarn and Knitting Mill.—D. P. McBrayer is organizing a \$50,000 company for the establishment of a yarn and knitting mill.

Anderson—Cotton-oil Mill.—The company lately reported to be organized by W. F. Cox for establishment of a cottonseed-oil mill will be known as the Excelsior Cottonseed Oil Mill Co.

Charleston—Ice Factory.—It is reported that Baltimore and Charleston capitalists, represented by J. T. Kingsington of Baltimore, will establish a \$100,000 ice factory in Charleston.

Chester—Construction Company.—The South Atlantic Construction Co. has been incorporated, with a capital stock of \$100,000, by W. A. Barber (president), J. H. Marion and H. R. Corbin.

Columbia—Ice Factory.—The Consumers' Ice Delivery Co. states that there is no truth in the report that it will erect a new ice factory.

Columbia—Telephone System.—John Schofield, 493 Greenwich street, New York; Henry O. Reed, 11 Broadway, New York; Jerome Bradley, 129 Furman street, Brooklyn, N. Y., and J. A. Helvin of Charlotte, N. C., have incorporated the South Carolina Telephone Co. for construction of telephone systems; capital stock \$50,000.

Columbia—Cotton Mill.—A company will be organized for establishment of cotton mill, as reported last week; it will be installed with 6000 spindles and 200 looms. No charter has been obtained as yet, nor has name been selected. Address for information W. B. Smith Whaley & Co., 1328 Main street.

Darlington—Cotton Mill.—The Darlington Cotton Mills, lately reported as to install 6000 additional spindles, states that its plans for enlargement of mill are not matured.

Elloree—Warehouse Company.—Chartered: The Elloree Tobacco Warehouse, capital stock \$2500, by J. J. Bland, J. B. Gates, R. E. Clark and others.

Greenville—Cotton Mill.—Huguenot Mills has installed thirty-two additional looms, and will install fifty more.

Mala—Cotton Mill.—William Hunter (lately reported as to erect a cotton mill at Central, S. C.) is endeavoring to organize a company for the erection of a mill at Mala; \$75,000 has been subscribed. Address William Hunter at Liberty, S. C.

Orangeburg—Cotton Mill.—The Enterprise Cotton Mills cannot make any definite announcement as to when its mill will be equipped and started up; Arthur Whittam, superintendent.

Pendleton—Ginning Company.—The Pendleton Ginning Co. has been incorporated, with a capital stock of \$3000, by S. L. Eskew, president; J. J. Sutton, treasurer-secretary.

Pickens—Cotton Mill.—The company previously reported to be organized for erection of a cotton mill will have a capital stock of \$200,000. Address for particulars Julius E. Boggs.

Rock Hill—Cotton Mill.—The Crescent Cotton Mills will hold a meeting September 13 to consider issuing \$50,000 of bonds; R. Lee Kerr, president.

Wellford—Ginnery, etc.—The Wellford Ginnery has been incorporated to gin cotton, manufacture bates, etc., by J. R. Snoddy, J. S. Ballinger, Jr., W. E. McMakin and T. E. Moore; capital stock \$5000.

TENNESSEE.

Bristol—Ice Factory.—The Diamond Ice Co. will enlarge its plant by the erection of a 25-ton ice factory.

Charleston—Silica Deposits.—S. J. Alken of Cleveland, Tenn., and associates have discovered silica deposits near Charleston (not tripoli, as reported lately), and will develop.*

Brownsville—Machine Shop.—Claiborne & Lee will erect machine shop to be operated in connection with their blacksmith shop and woodworking factory.

Chattanooga—Bottling Works.—The Eureka Bottling Co. has been incorporated for the purpose of bottling soda water, etc., by Twinam D. Willingham, C. S. Crandall, C. R. Smith and others.

Chattanooga—Iron-ore Lands.—R. M. Standefer of Oxford, Miss., representing Eastern and Southern capitalists, has purchased 10,000 acres of ore lands in Rhea, Bledsoe and Cumberland counties and will develop a part of it at once. Mr. Standefer now owns about 35,000 acres of iron-ore and timber lands in these counties.

Chattanooga—Coal Mines.—J. S. Huffnaker of Wilmington, Del.; Samuel L. Trump of Wilmington and G. R. Lamont of Albany,

N. Y., owners of the Dunlap coal mines near Chattanooga, are preparing to put them in operation.

Chattanooga—Mercantile.—E. C. King, P. H. de Roach, I. M. Stephens and others have incorporated the Globe Mutual Supply Co., with a capital stock of \$5000.

Chattanooga—Telephone Exchange.—The Chattanooga Telephone Co. has been organized for the establishment of a telephone exchange, with C. D. Mitchell, president; Frank Miller, vice-president; A. S. Glover, secretary, and E. Meredith, treasurer; capital stock \$150,000.

Chattanooga—Showcase Factory.—The Tennessee Fixture & Showcase Co. will increase the capacity of its plant by the erection of an entirely new brick and stone factory.

Columbia—Ice Factory.—An ice factory with capacity of 500 to 1000 pounds per day is reported as to be erected. Address the quartermaster at the Columbia Arsenal, U. S. A.*

Crossville—Coal Lands.—The Citizens' Cooperative Coal & Land Co., lately reported as having commenced the development of its property, has purchased coal lands, but is undecided as to whether or not it will sell the property or operate it.

Gallatin—Phosphate Lands.—The Summer Phosphate Co. (lately mentioned as having purchased and to develop phosphate lands in Summer county) holds 2004 acres of land, bearing 500 acres of phosphate rock; mines when in full operation will require about 1000 laborers.*

Harriman—Rolling Mill.—The Knoxville (Tenn.) Iron Co. has purchased the Harriman rolling-mill property, as recently reported, and will operate same, adding a number of improvements.

Jackson—Cotton Mill.—A movement is on foot for the organization of a stock company to erect a cotton mill, as lately reported; 6000 spindles will be installed. Address Thomas Tate.

Jasper—Handle Works.—The Sequachee Handle Works has been incorporated by G. Sherman, A. R. Hall, W. D. Spears, John A. Schultz and Thomas H. Hill; capital stock \$10,000.

Mossy Creek—Smelting Works.—The John Weir Zinc Co. will erect, it is reported, extensive smelting works.

Nashville—Coal Mines.—The Cumberland Coal & Coke Co., operating in Cumberland, White and other counties, has been incorporated with a capital stock of \$5,000,000.

Nashville—Furniture Factory.—The Edgefield & Nashville Manufacturing Co. will rebuild its furniture factory recently reported burned; new building will be of brick, 250x60 feet, four stories, and cost \$10,000.

Nashville—Mining.—The Cumberland Mining Co. has been incorporated, with a capital stock of \$2500, by James J. Tinsley, T. G. Tinsley, A. L. Ledoux, T. M. Steeger and Charles F. Polak, to develop phosphate, pyrites and other minerals.

Waverly—Telephone Company.—The Humphreys County Telephone Co. has been incorporated with a capital stock of \$1000.

TEXAS.

Bay City—Telephone System.—The Wharton & Bay City Telephone Co. has been incorporated, with a capital stock of \$5000, by C. D. Kemp, Gerard A. Harrison and Frank Rugoly, for the construction of a telephone system.

Beaumont—Ice Factory.—The Beaumont Ice, Light & Refrigerating Co. is arranging to erect another ice factory, with daily capacity of twenty tons; plant to cost about \$28,000.

Corsicana—Cotton Mill.—The superintendent of a large cotton mill in Canada proposes to take \$15,000 stock in a \$100,000 company, provided the citizens of Corsicana succeed in organizing such a company for the establishment of a cotton mill. Address George T. Jester, president Commercial Club.

Cuero—Electric-light Plant and Water Works.—The city has taken no action regarding the establishment of an electric light plant in connection with its water works system; the first probable improvement will be to increase the capacity of the water-works system by installing an additional pump and boiler; J. C. Woodworth, mayor.

Dallas—Water Works.—The city will not issue bonds for any purpose at an early date; may enlarge its water capacity shortly, but will do so without issuing bonds; John H. Tralor, mayor.

Dallas—Machine Shops.—The Little Giant Co. has been incorporated, with a capital stock of \$410,000, for the purpose of manu-

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Denison—Cotton Mill.—The American Spinning Co. (reported last week as incorporated by H. Brooks and others) will begin spinning in about ninety days; the building, shafting and boiler capacity is 50,000 to 60,000 spindles, but 15,000 spindles will be operated at present; this mill was built about eight years ago, and cost about \$280,000; about \$75,000 worth of additional machinery has been purchased and will be installed.

Fort Worth—Iron Works.—The Fort Worth Iron Works has been incorporated to conduct a general foundry business by E. B. Harold, W. B. Harrison, George Strong and others; capital stock \$50,000.

Galveston—Storage, etc., Company.—Chartered: The Wiley & Nicholas Co., to conduct a general storage business, by George Nicholas, William Wiley, William R. Thompson and others; capital stock \$440,000.

Hardwood—Cotton Compress.—Joseph Taylor has established a 70-saw cotton gin, including pneumatic elevator, distributor and self-packing cotton press.

Houston—Delinting.—The plant lately reported as to be erected by Prof. T. C. Thiele for delinting cottonseed by a patent process will cost \$50,000; arrangements are progressing.

Houston—Canal.—The Trinity Rice, Land & Irrigation Co., reported several months ago as incorporated, etc., will construct a canal 125 feet deep and eighteen miles long, passing through 15,000 acres of land owned by it.

Houston—Mining Company.—The Milby-Dow Mining Co. has increased its capital stock from \$50,000 to \$100,000.

Navasota—Ice Factory.—Horlock & Holly contemplate erecting a 15 or 20-ton ice factory.

Overton—Cotton Compress.—The Overton Compress Co. has been incorporated by J. R. Trion, W. H. Barton, J. W. Florey and others; capital stock \$8000.

Palo Pinto County—Coal Mines.—J. M. Pressler of Comanche, Texas, has interested Eastern capital in the development of 90,000 acres of coal lands in Palo Pinto county.

Sherman—Brick Works, etc.—R. E. Kreuger and August Saul have purchased and will develop clay deposits, also erect a pressed-brick factory; the main building will be 150x450 feet, not inclusive of warehouses, engine and other machinery rooms; capacity 30,000 brick per day, and 100 operatives will be employed.

Sherman—Cooperage.—It is reported that a large cooperage will be erected; names of interested parties will be announced later.

VIRGINIA.

Bedford City—Cheese Factory.—Otho Hull, H. B. Wilkerson, E. M. Bell, Cyrus Cline and others will organize a stock company for the erection of a cheese factory.

Bristol—Coal Mines, Coke Ovens, etc., Development.—The Black Mountain Coal Co. has been incorporated, with John H. Caldwell, president; Samuel L. King, vice-president and treasurer, to develop 8000 acres of coal lands in Lee county and to establish a coke oven at Crab Orchard. George L. Carter, president of the Virginia Coal, Iron & Coke Co., is a director in the new company. The capital stock is \$100,000.

Galt's Mills—Flour Mill.—C. O. Weekly will increase the capacity of his flour mill from forty to seventy-five or eighty barrels.

Lynchburg—Telephone System.—The Southern Bell Telephone & Telegraph Co. Hunt Chipley, superintendent, will establish a new system in Lynchburg to cost \$100,000; a \$50,000 switchboard is one of the improvements.

Newport News—Paving-material Factory.—Dr. Leon Labonde is in correspondence with Mayor Moss relative to the establishment of a plant for the manufacture of paving materials in Newport News.

Woodstock—Water Works.—P. S. Rolier, city engineer, has completed a survey of the proposed water-works system recently mentioned.

Petersburg—Ice Factory.—Williams & Sons Co., reported during the week to establish an ice factory, will add a 15-ton plant to its business; contract will be awarded in October.

Petersburg—Shed.—The South Side Railway & Development Co. will erect large shed, as reported last week; Allen F. Edwards, general manager.

Rockingham—Flour Mill.—E. W. Carpenter has awarded contract for erection of a 75-barrel flour mill.

Rustburg—Bridge.—Bids are wanted for constructing a bridge across Falling river; William H. Wingfield, commissioner.

Tunstall—Planing Mill, etc.—H. C. Parrott has established a planing mill, wagon, buggy, etc., repair shops.*

WEST VIRGINIA.

Cherry Run—Coal Mines.—The Tidewater Anthracite Coal Co. has been incorporated, with William G. Knowles, president; Harrison Snyder, vice-president; William A. Brown, secretary and treasurer, all of Philadelphia, Pa. This company will develop recently-discovered coal deposits at Cherry Run; capital stock \$3,000,000. J. W. Nihiser of Hagerstown, Md., is also interested.

Dobbin—Lumber Mill.—The J. L. Rumbarger Lumber Co. is erecting new mill at Dobbin, and not William Whitmer & Sons of Philadelphia, as lately reported.

Eastbank—Coal Mines.—The Kanawha Coal Mining Co. has been incorporated, with an authorized capital of \$50,000, by C. A. Jewell of Hubbard, O.; F. E. Lair of Eastbank; Morris J. Lesson of Knoxville, Pa.; J. N. Moore of Butler, Pa., and George E. Price; company has purchased and will operate the splint mines of the Kanawha Splint Company.

Elkins—Water Works.—D. G. Adelsberger of Baltimore, Md., has prepared plans for the proposed water works at Elkins to cost \$50,000. Address "The Mayor."

Harding—Coal Mines and Coke Ovens.—The Junior Coal Co. (office at Elkins, W. Va.) is opening mines at Harding, and expects to erect from eighty to 100 coke ovens; as many as possible will be built before winter, and the balance in the spring of 1900; company only recently completed twenty-six additional ovens.

Huntington—Oil-land Development.—The Putnam Oil & Gas Co. (recently reported as incorporated) has extensive oil lands in Putnam and adjacent counties, and will begin developments at once; George S. Wallace, president.

Martinsburg—Creamery.—Robert N. Fleagle of Melrose, Md., and Jas. Hoge of Baltimore, Md., have purchased the old creamery at Martinsburg and organized the Martinsburg Creamery Co. to improve and operate it; capacity 1000 pounds of butter per day.

Maysville—Flour Mill.—W. P. Hollen will remodel his flour mill from the burr to the roller process.*

New Martinsville—Ice Factory.—Cornett & Newman contemplate erecting an ice factory.*

Shinnston—Coal Lands.—It is reported that the Lowrey Coal & Coke Co. of Jackson, Miss., has purchased 7000 acres of coal land at Shinnston from the Monongahela River Railroad Co. and will erect an \$80,000 plant.

Sistersville—Oil Company.—W. James Brown, M. A. Sybert, James H. Pine and others have incorporated the Venture Oil & Gas Co., with an authorized capital of \$100,000, to develop for oil and gas.

Wheeling—Iron and Wire Works.—The Architectural Iron and Wire Works will enlarge its plant by the manufacture of iron and wire fences and all building construction work. Those interested are Dr. L. A. Rich of Cleveland, Ohio; M. Rich and H. Rich of New Martinsville, and J. Muscovitis of Wheeling. Address the last named.

BURNED.

Ellisville, Miss.—Two dry-kilns of Mulford Parker; loss \$1000.

Folks Store, S. C.—J. C. Folk & Bros.' gin and mill destroyed by storm; estimated loss \$2000.

Gonzales, Texas.—Beeson & Zint's gin.

Kansas City, Mo.—Jacob Dold Packing Co.'s plant.

Louisville, Ky.—National Foundry & Machine Co.'s plant; estimated loss \$20,000.

Merrouge, La.—Roundhouse and repair shops of St. Louis, Iron Mountain & Southern Railway; loss \$12,500.

Seguin, Texas.—The Sonka Cotton Gin; estimated loss \$6000.

West Falls, Md.—Ernest Clary's flour mill; estimated loss \$5000. John W. Wilson's creamery; loss about \$1200.

Yellowpine, La.—The Yellow Pine Lumber Co.'s plant; estimated loss \$50,000.

BUILDING NOTES.

Atlanta, Ga.—Business Building.—H. M. Atkinson and associates will erect, it is reported, a 15-story business building; Bruce & Morgan will prepare the plans.

Buckhannon, W. Va.—Courthouse.—Upshur county will expend \$20,000 for erection of courthouse; J. J. Morgan, county clerk.

Charlotte, N. C.—Church.—The A. R. P. congregation will remodel its church. Address "The Pastor."

Charlotte, N. C.—Residence.—John W. Morrison will erect residence after plans by Frank P. Milburn.

Cooper, Texas.—Courthouse.—The city will not erect courthouse, as lately reported, but Delta county has issued \$35,000 of bonds for erection of courthouse in Cooper. Address W. S. Banister, county judge.

Covington, Va.—Dwellings.—John S. Ham has awarded contract to Pirkey & Pace for erection of four dwellings.

Gilmer, Texas—Depot.—The St. Louis Southwestern Railway Co., R. Harding, general manager, St. Louis, Mo., has no intention of erecting a depot at Gilmer, as reported lately.

Gulport, Miss.—Warehouse.—The report that H. J. Johnson of Ellisville is interested in erection of a cotton warehouse at Gulport is incorrect.

Knoxville, Tenn.—Sanitarium.—Dr. E. S. Rogers and others have incorporated the East Tennessee Electrical and Surgical Sanitarium; will install static, galvanic and faradic batteries; capital stock \$2000.

Little Rock, Ark.—Depot.—The Choctaw & Memphis Railway Co. has advertised for bids by September 3 on the erection of a \$25,000 passenger and freight depot. Address 110 East Markham street.

Louisville, Ky.—Residences.—J. B. Hutchings has made plans for four residences for Theo. Ahrens.

Louisville, Ky.—School.—Law School board advertises for bids on \$80,000 school.

Memphis, Tenn.—Building.—A four-story building 153x136 feet, to cost \$60,000, will be erected by the Frost estate and occupied by the National Biscuit Co.; architects are Shaw & Shaw.

Montgomery, Ala.—School Building.—Competitive plans and specifications for the erection of one eight-room school building, to be of brick and cost from \$18,000 to \$20,000, will be received until September 11. Address Joseph M. Kennedy, chairman committee. Usual rights reserved.

New Iberia, La.—School.—The city will build an industrial school. Address "The Mayor."

Opelika, Ala.—Depot.—The R. D. Cole Manufacturing Co. of Newnan, Ga., has contract at \$5000 for erection of depot at Opelika for the Western Railway of Alabama; A. O. Dayton, superintendent, Camden, N. J.

Parrish, Ala.—Depot.—The Southern Railway Co. will erect depot at Parrish, as lately reported; F. S. Gannon, Washington, D. C., general manager.

Piedmont, W. Va.—Building.—The B. F. Graham Company has awarded contract to Pirkey & Pace of Covington, Va., for erection of a three-story brick building, to have steam heat and be lighted by electricity.

Richmond, Va.—Depot.—Frederick Sittlerding has secured contract for erection of proposed depot of Southern Railway Co.; building will be of granite and gray pressed brick, 70x175 feet, with green slate roof and a tower 100 feet high, which will have wrought-iron clock dials on all four sides; Frank S. Gannon, Washington, D. C., general manager.

Salisbury, N. C.—Store Building.—Hayden, Wheeler & Schwend of Charlotte, N. C., are preparing plans for a three-story brick store building for P. H. Thompson and others at Salisbury; bids will be received until September 16.

Vicksburg, Miss.—Warehouse.—Lee Richardson & Co. will rebuild warehouse recently burned.

Washington, D. C.—Buildings.—Permits issued to Mrs. B. S. Robinson for two-story brick dwelling 37x34 feet, shingle roof, furnace heat, cost \$8000; to E. E. Donohue for brick dwelling to cost \$6000; to Mrs. C. Somerville for three-story brick dwelling 27x58 feet, press-brick and terra-cotta front, flat tin roof, hot-water heat, cost \$15,000.

Washington, D. C.—Truckhouses.—John Hughes, Jr., of Baltimore has contracts at \$12,638 and \$12,489 for erection of two truckhouses at Georgetown and Columbia Heights.

Washington, D. C.—School Building.—Sealed proposals will be received until September 23 at the office of the commissioners, John B. Wight, John W. Ross and Lansing H. Beach, for erecting a manual training school. Blank forms of proposals and specifications, together with all necessary information, at the office of the inspector of

buildings. Proposals must be enclosed in an envelope and endorsed "Proposals for constructing a manual training school." Usual rights reserved.

RAILROAD CONSTRUCTION.

Railways.

Alken, S. C.—The Alken & Augusta Electric & Power Co. has been organized by Charles W. Davis of Graniteville and others to build an electric railway from Alken to Augusta, Ga.

Athens, Tenn.—Preliminary surveys of the Tennessee Valley Railroad have been completed from Harriman to Athens, forty-eight miles.

Bainbridge, Ga.—Grading has been practically completed for a five-mile branch of the Bainbridge Northern Railroad, commencing at the six-mile post on the main line and running in an easterly direction to valuable timber properties.

Cedar, Texas.—The contract for grading and tracklaying on a 25-mile extension of the Texas & New Orleans Railroad, from Cedar to Athens, are to be let about October 1. Surveys will soon begin for an extension of the road from Rockland to Cedar.

Elba, Ala.—Contract has been let for building the Chattahoochee & Gulf Railroad, which has been surveyed to run from Columbia to Elton, eighty-two miles.

Eureka Springs, Ark.—A survey has begun for an extension of the Eureka Springs Railway to Harrison.

Florence, S. C.—The Atlantic Coast Line Co. is laying the track of the Wilmington, Columbia & Augusta Railroad Co. between Florence and Sumter, forty-eight miles, with 70-pound steel rails.

Franklin, N. C.—The North Carolina incorporators of the Ohio River, Franklin & Tidewater Railway are negotiating for immediate survey for the construction of the road between the Georgia and Tennessee lines by March 1 next.

Gaffney, S. C.—The South Carolina & Georgia Extension Railroad is building a short spur from its Gaffney branch to the old Cherokee Iron Works, on Broad river, for the purpose of bringing out slag to be used at the Empire Steel Works of Greensboro, N. C.

Greensboro, N. C.—It is reported that work will be commenced at once on the construction of the Mt. Airy & Virginia Railroad, to run from Mt. Airy, N. C., to the mills of Kibbler & Kay, on the Dan river, in Patrick county, Virginia.

Hagerstown, Md.—Projectors of the Hagerstown & Myersdale Electric Railway are seeking an extension of it on the part of the railway company of the franchise, granting it permission to enter Hagerstown.

Henrietta, Texas.—Every effort will be made to insure the completion shortly of the Gulf & Brazos Railroad from Park City to Mineral Wells, on the way to Henrietta.

Hickman, Ky.—It is reported that the Illinois Central Railroad is prospecting for the construction of a line from Dyersburg, Tenn., to the Mississippi river in Lake county.

Knoxville, Tenn.—Arrangements are being made for a survey of an extension of the Southern Railway from Maryville to Gamble Store, about ten miles.

Knoxville, Tenn.—The Charleston, Cincinnati & Chicago Railroad will extend its East Tennessee branch, running from Johnson City to Unaka Springs, ten miles beyond Unaka Springs into a rich timber country.

Marquez, Texas.—The Waco & Sabine Pass Railroad will be granted right of way through the county depot grounds at Marquez and a bonus of \$5000 if the road is built through the city. Col. R. P. Duncan, general manager of the road, thinks that actual work will begin in a few months.

Morgantown, W. Va.—Contracts are to be let for tracklaying and ballasting of nine miles of railroad between Morgantown and Smithfield for the Baltimore & Ohio Railroad. The cost of the road will be about \$250,000.

Newton, N. C.—Surveyors are planning a new route for the entrance of the Southern Railway to its new depot to be erected at Newton.

Norfolk, Va.—The Norfolk Street Railroad Co. and the Chesapeake Transit Co. are seeking for franchises to extend their lines in Norfolk.

Norfolk, Va.—The Princess Anne & Cape Henry Railway Co. and the Chesapeake Transit Co. are endeavoring to secure right of way for the construction of a road connecting Virginia Beach and Cape Henry to

open up to Norfolk lumber traffic of more than 35,000 feet a day.

Pulaski, Texas.—Bids are being received for the construction of the Austin & Colorado Valley Railroad from Wharton to Vidor.

Quintana, Texas.—Prospects are good for construction of a railroad from Rosenberg to Quintana.

Sistersville, W. Va.—It is reported that work will begin on the proposed Sistersville, Pennaboro & Burnsville Railroad by October 1. Mr. L. P. Wilson of Ritchie county is president of the company.

Southport, N. C.—William A. Guthrie of Durham has obtained for Philadelphia capitalists a charter for the Southport, Wilmington & Northwestern Railway to run from Wilmington to Southport, thirty miles.

Sunny South, Ala.—Construction has begun upon the Sweetwater, Livingston & Sunny South Railroad, which will run from Sunny South, Ala., by way of Livingston Mills to Sweetwater, sixteen miles, and penetrate a rich timber country.

Tallahassee, Fla.—The Gainesville, Ocala & Charlotte Harbor Railroad has been chartered to build a road from the Georgia & Florida line in Columbia county, Florida, to Charlotte Harbor, in Manatee county, 325 miles.

Tarboro, N. C.—Shipments of steel rails for eleven miles of the Eastern Carolina Railroad Co., which will have its eastern terminus at Tarboro, have been received.

Wilson, N. C.—The Atlantic Coast Line is preparing to build a sidetrack to the site of the cottonseed-oil mill to be erected at Wilson.

Street Railways.

Atlanta, Ga.—It is announced that the petition of Edwin P. Ansley, who proposes to build a belt electric street railway, will be granted by the city council.

Birmingham, Ala.—Material has been ordered by the Birmingham Railway & Electric Co. for a loop 3000 feet long to the fair grounds.

Chattanooga, Tenn.—Ten cars of rails from Pittsburg, Pa., will be used by the Chattanooga Electric Railway in rebuilding part of its system and in repairing other parts.

Columbia, N. C.—Application has been made by George M. Bunting of Chester, Pa., and others for a charter of the Greenville Traction Co. to construct the electric street railway at Greenville. It is reported that the company will build five miles of road within the city limits at once; that it proposes to build a spur to Paris Mountain, a summer resort six miles away, and also an extension connecting the Piedmont and Pelzer cotton mills with Greenville. Actual work will begin within six months, and the first five miles must be completed within twelve months.

Macon, Ga.—Work is to begin upon a street-car line three miles long, connecting the street railways in Macon with North Highlands across the Ocmulgee river.

New Orleans, La.—The St. Charles Street Railroad Co. has asked for an extension to cover a period of fifty years of its charter and for its enlargement, so as to permit the building of extensions of routes up and down town.

Newport News, Va.—Work has begun on double-tracking on the line of the Newport News & Old Point Railway & Electric Co. in Newport News.

Rome, Ga.—The Street Electric Railway Co., of which J. B. Marvin is manager, is contemplating an extension of its line from Mobley Park to Lindale.

St. Louis, Mo.—The St. Louis & St. Charles Railroad Co. has been incorporated by J. H. Lucas and others, with a capital of \$500,000.

Towson, Md.—The Baltimore & Elkridge Railway Co. has asked permission to lay tracks on the Washington road from the present terminus of the United Railways of Baltimore to Elkridge.

Washington, D. C.—It has been decided that the Metropolitan Railway Co. may, under certain conditions, lay tracks on certain streets in Washington to connect their line with the car barn.

Waycross, Ga.—The increase of electric-power by the Satilla Manufacturing Co. makes a possibility of the construction of an electric railway line at Waycross.

Fair at Clarksburg, W. Va.—The West Virginia Central Agricultural and Mechanical Society holds its thirty-third consecutive fair at Clarksburg on October 3, 4, 5 and 6 next, and expects to have the best exhibit of agricultural and mechanical products as well as the best speed trial in its history; Mr. T. T. Wallis, president, and M. M. Thompson, secretary.

Machinery, Proposals and Supplies Wanted.

Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machine manufacturers throughout the country. The MANUFACTURERS' RECORD has received during the week the following particulars as to machinery that is wanted.

Belting.—See "Woodworking Machinery."

Belting, etc.—The Sulphur Mines Co. of Virginia, S. C. Crenshaw, president, Richmond, Va., is in the market for several thousand dollars' worth of belting, shafting, pulleys, etc.

Boiler.—S. P. Peck, Hinton, W. Va., wants a 200-horse-power tubular boiler (horizontal preferred).

Boiler and Engine.—McDonald Cotton Mills, Sylacauga, Ala., will want a boiler and engine.

Boiler and Engine.—See "Mining Equipment."

Boiler and Engine.—J. T. Noojin, Attalla, Ala., wants a 40-horse-power engine and boiler.

Boring Machinery.—J. B. Poore, Scranton, Pa., wants new or second-hand boring machine, four-and-one-half-inch or five-inch bar.

Canning Machinery.—M. J. Solomons, secretary-treasurer Chatham Real Estate & Improvement Co., Savannah, Ga., wants to correspond with manufacturers of canning machinery.

Cotton-mill Machinery.—McDonald Cotton Mills, Sylacauga, Ala., will want to purchase some machinery for 10,000-spindle mill.

Cotton-mill Machinery.—Pearl Cotton Mills, Elberton, Ga., will buy one speeder and five spinning frames.

Cotton-oil Mill.—Summit Gln & Improvement Co., Summit, Miss., wants prices, etc., on necessary machinery for two-press cottonseed-oil mill; also wants to correspond with engineer to draw plans and specifications.

Dredging.—Sealed proposals for dredging in Potomac river will be received until October 2. Information furnished on application. Charles J. Allen, lieutenant-colonel, engineers, United States Engineer Office, 601 Eighteenth street N. W., Washington, D. C.

Electrical Machinery.—Dawson Oil Co., Dawson, Ga., is in the market for second-hand dynamo, 50 to 75-horse-power, 16-candle-power lights; wants delivered prices, with name of maker.

Electrical Machinery.—Richmond Cedar Works, Richmond, Va., is in need of an electric generator of from 300 to 400-light capacity, sixteen candle-power, 100 volts.

Electrical Machinery.—See "Mining Equipment."

Flour-mill Machinery.—W. P. Hollen, Maysville, W. Va., will want to correspond with manufacturers of roller flour-mill machinery.

Heating Apparatus.—C. L. Hickman, Clarksburg, W. Va., is in the market for hot-air furnace to heat eight-room school building.

Ice Factory.—H. S. Ackiss, Norfolk, Va., wants to correspond with manufacturers of ice machinery who will put up plant complete for a contract price.

Ice Machinery.—The Quartermaster, U. S. A., Columbia Arsenal, Columbia, S. C., wants information regarding the installation of an ice plant of 500 to 1000 pounds daily capacity.

Ice Machinery.—D. H. King & Co., Winston, N. C., will want a complete plant of forty tons capacity.

Ice Machinery.—R. H. Dykers, Waynesville, N. C., is receiving estimates on ice machinery.

Ice Machinery.—Horlock & Holly, Navasota, Texas, are securing bids on a 15 or 20-ton ice factory.

Ice Machinery.—Cornett & Newman, New Martinsville, W. Va., are receiving estimates on erection of ice factory.

Ice Machinery.—S. P. Peck, Hinton, W. Va., wants a new or second-hand 15 to 20-ton compressor ice machine.

Levels.—N. H. Littlejohn, Gaffney, S. C.,

wants addresses of parties handling levels for terracing.

Machine Tools.—See "Wagon-factory Equipment."

Machine Tools.—See "Telephone-factory Supplies."

Match Machinery.—William Dunn, president New Berne Ice Co., New Berne, N. C., wants addresses of manufacturers of match machinery.

Mining Equipment.—John N. Adams, president Blue Springs Mining Co., Stony Creek, Tenn., wants bids on a complete plant, including boiler and engine (gasoline, kerosene, wood or coal), pump to raise 5000 gallons per day 100 feet high and run a dynamo to supply thirty sixteen-candle-power incandescent lamps and one arc light, the whole to be delivered complete at Elizabethton, Tenn., ready for erection.

Ore-washer.—"Ore Washer," care of Manufacturers' Record, Baltimore, Md., wants to purchase an ore-washer.

Paving.—Sealed proposals will be received at the office of C. A. Ballou, city engineer, Danville, Va., until September 18 for removing from Main street a distance of 5120 feet the old curb, paving and macadam stone, grade the street to proper shape, furnish and set six-inch granite curbstone, furnish all material and repave the street with vitrified brick, all in accordance with specifications prepared by the engineer, which can be seen in office in municipal building. A certified check of \$1000, made payable to the city treasurer, must accompany each bid. Usual rights reserved.

Peanut-cleaners.—R. C. Josey, Scotland Neck, N. C., wants addresses of manufacturers of peanut-cleaners (not separators).

Pulleys and Shafting.—See "Woodworking Machinery."

Pump.—See "Mining Equipment."

Railway Equipment.—D. B. Anderson, general manager Sumner Phosphate Co., Gallatin, Tenn., wants to correspond with manufacturers of (Shay) engine and track.

Railway Equipment.—Lidgerwood Manufacturing Co., J. H. Dickinson, Southern engineer, Atlanta, Ga., is in the market for one geared locomotive and tender, ten to sixteen tons, 36-inch gauge, for wood rails; wants prices delivered Waynesville, N. C.

Rice-cleaning Machinery.—The Magnolia Gln & Light Co., Magnolia, Miss., wants prices on rice-cleaning machinery.

River Improvement.—Sealed bids in triplicate for improving mouth of Brazos river, Texas, by repairing jetties and otherwise, will be received until September 20. For information apply to C. S. Riche, United States Engineer Office, Galveston, Texas.

Shafting and Pulleys.—See "Belting."

Silica.—S. J. Aiken, Cleveland, Tenn., wants to communicate with parties or firms using or having need of silica.

Telephone-factory Supplies.—Interstate Telephone & Telegraph Co., C. E. Egan, general manager, Durham, N. C., wants drills, stamps, presses, shaper, milling machines, brass castings and steel for permutation magnets.

Tobacco-warehouse Equipment.—J. J. Bland, Elmore, S. C., wants tobacco-warehouse equipment.

Wagon-factory Equipment.—H. C. Parrott, Tunstall, Va., is in need of rim machinery, new or second-hand, such as binders, shapers, steaming apparatus to steam rims, etc.

Well-drilling.—Sealed proposals will be received by Cullman, Ala., until September 25 for boring an artesian well, to be ten inches diameter, 200 feet deep; R. I. Burke, clerk.

Woodworking Machinery.—See "Match Machinery."

Woodworking Machinery.—R. L. Permenter, Macon, Ga., wants to correspond with manufacturers of machinery for making spokes and handles; also fine mantels.

Woodworking Machinery.—Conetoe Manufacturing Co., Claude Wilson, manager, Conetoe, N. C., will want cut-off saw, drag saw, barrel-heading saw, shingle saw, pulleys and shafting, hangers, belting, etc.

TRADE NOTES.

Window-Cleaner Patented.—Mrs. O. Hilken, 535 Wythe avenue, Brooklyn, N. Y., is offering for sale the entire right in a patented window-cleaner.

Instruction by Mail.—A feature of the National Export Exposition at Philadelphia will be an exhibit by the International Correspondence Schools of Scranton, Pa., illustrating their method of teaching by mail. The bound volumes of their instruction and question papers, as well as work done by

students, including numerous drawing-plates, may be inspected by visitors, and a representative will be in charge to give full particulars.

Flour Mills Contracted For.—The Wolf Co. of Chambersburg, Pa., has filed during the week orders for complete 100-barrel mill, with corn and feed plant, for doubling capacity of a mill, for complete 75-barrel flour mill and for a mill of capacity for fifty barrels of flour, twenty-five barrels of buckwheat and twenty-five barrels of rye.

Taps, Dies, Reamers, etc.—The actively engaged machine trades of the country and the South are at all times in want of taps, dies, reamers, screw plates, etc. Those about to buy in this line are advised to ask for price-lists of Messrs. W. L. Brubaker & Bros. of Millersburg, Pa., who manufacture a complete line of the tools and supplies mentioned.

Saw Mill for Sale.—In common with other branches, the lumber business is now very active. An opportunity to engage in this active line is offered by W. E. Fleming of Parkersburg, W. Va. As receiver, Mr. Fleming offers for sale a complete milling plant. (See advertisement.)

Southern Roofing Firm.—The general activity in all lines throughout the country includes the building trades especially. Supplies for the building trades are therefore in active demand. One of the well-known roofing firms of the South is that of Messrs. J. A. Batten & Bro. of Clarksburg, W. Va. Batten & Bro. are manufacturers of and dealers in all kinds of tin and galvanized-iron materials; also dealers in slate and tin roofing, slaters' felt, nails and spouting.

Opportunity for Foundry Manager.—A competent mechanic having small capital to invest is wanted to take an interest in an established foundry and machine business in one of the healthiest parts of the South. The business has been established fifteen years, is in good condition and has many orders on file and good business in prospect. Shipping facilities at hand. The equipment of machinery is modern. For information address "F," care of Manufacturers' Record. (See advertisement.)

For Lubricating Purposes.—The usual experience of engineers who test the celebrated Albany lubricating compound and compound cups for all lubricating purposes is reflected in that of F. M. Sprague, 233 W. Seventh street, New York, who writes Adam Cook's Sons, sole manufacturers, 333 West street, New York, under date of August 14 as follows: "The compound came all right, too. They are doing the work to a T and are filling a 'long-fell want.' * * * We have ordered fifty pounds of your No. 3 grease."

Pittsburg Manufacturing Sites.—Frequently there are offered opportunities to obtain excellent manufacturing sites in old established industrial centers. Sometimes most reasonable figures are accepted for such sites. Two contiguous sites at Pittsburg, the iron and steel center of Pennsylvania, are now offered on the market. Facilities for coal and natural gas are obtainable at the sites at low figures; sites back front the river and railroad. Messrs. J. W. Drape & Co. of Pittsburg, Pa., can furnish particulars concerning this offer.

One Economizing Item.—The active competition seen nowadays in every business causes managers to economize wherever possible, with a view of lessening the cost of product. Manufacturers operating quantities of machinery find that lubrication efficiently done is a constant and apparent source of lessening cost of production, besides tending to lengthen the life of the apparatus used. There are many lubricating liquids and compounds on the market giving varying satisfaction in varying cases. For general use there is probably nothing as yet introduced that excels high-grade oil. A general line of this is manufactured by the Harris Oil and Grease Works of Titusville, Pa., for valves, cylinders, engines, machinery, etc. The company claims its oils will not gum, and are free from water, grit, sediment or impurity, and so confident of the extraordinary merits of its product that it will ship by the barrel on trial. Send for circulars, etc.

High-Grade Boilers, Engines, etc.—The Foreign Countries.—The general revival of active business conditions this year, especially in the manufacturing world, has extended to all parts of the civilized world. Manufacturers throughout the United States are especially busy supplying the

product for shipment to all parts of the country and to many foreign countries. Probably no line of machinery is ever at any time more in demand than boilers and engines, without which few manufactories can commence business. American builders of steam-power plants send their machines all over the world, and one of the most prominent of them is the Phoenix Iron Works of Meadville, Pa. This company builds the well-known Dick & Church automatic cut-off engines, and its boilers for accompanying same or not (as the case may be) are equally high grade. This establishment is at present handling many new orders, its most recent ones including a number from China and Japan. Its latest Southern contract is for supplying tandem compound engine and pair of horizontal return tubular boilers for mercantile establishment at Atlanta.

Power Transmission South.—On account of the great increase in business in the South and the realization of the continued improvement in Southern trade, the Dodge Manufacturing Co., claiming to be the largest American manufacturer of power-transmission machinery, has established an office in Atlanta, Ga. The company's specialties are the famous patent "Independence" wood-split pulleys and "American" system of rope driving, both widely and well known. The new office and distributing depot is at 40 South Forsyth street. W. L. Draper has charge, and he will be pleased to give specifications or advise upon subjects pertaining to the line. Since this office was started a large amount of Southern business has been secured, including five rope drives, distributing 350 horsepower from main engine through jack shaft to four different departments, in Texas; a 200-horse-power rope drive between two departments for textile mills in Georgia; a complete installation of Dodge split textile-mill pulleys, patent "American" system of rope transmission, ring oiling hangers, shafting, etc., for the branch mill of a New York company in Georgia; a 100-horse-power rope drive for mill in Georgia; a 35-horse-power rope drive between two right-angle shafts for cotton mill in Georgia; screw conveyors, pulleys, clutches, mule stands, etc., for cement works in Alabama; complete outfit of shafting, couplings, floor stands, patent capillary oiling pillow blocks, pulleys and other bearings, etc., for gas plant in Alabama. The Dodge Manufacturing Co.'s plant at Mishawaka, Ind., is undergoing great enlargements; new buildings are being erected and machinery installed to increase the products of both the foundry and machine shop.

Rendering Country Houses Comfortable.—In planning a country house it is aimed that the minimum amount of fuel be used in winter to insure it being comfortably heated, and inversely it is aimed that the sun's heat in summer will not penetrate the walls and the roof, so as to render the same uncomfortable when nightfall comes on. It has been difficult for many architects to convince their clients that a slight expense at the start would amply pay for permanent results obtained. An architect lately stated that there is a struggle going on under every roof between the cold and heat, which, though unseen, is not without its interest to the occupant of the house. The matter of creating warmth is the only one that need be considered, for the relation of heat and cold is such that if you provide against the severity of the former you at the same time protect yourself from the intensity of the latter. There is this difference, however, in the supply of heat: There is economy to be practiced, and this narrows the field to the simple question of protecting a house from the cooling effects of the weather. A corner room whose vertical walls are hollow cannot be comfortable when heated by a stove, for the reason that the surface of the stove has a temperature of 150 degrees, while the interior surface of the walls has a temperature of 40 degrees. The problem in this is the one presented to every man in building a dwelling—how to construct the exterior walls so that the temperature of the interior surface shall remain at 60 degrees, while the temperature of the exterior surface drops down to 20 degrees. It will at once seem apparent that this is only a question of thickness of walls. If all walls were made of one material, then this conclusion might be sound. But all the substances which, in one shape or another, might be used in the construction of the wall have a definite value as to their capacity for conducting heat. For instance, the conducting power of brick was determined in connection with that of various other substances by Peclet to be 4.83—that is, this fraction represents the quantity of heat units transmitted per square foot per

hour by plate one inch thick. By taking the value of mineral wool to be 0.323, which is the value of sheep's and cotton wool (as a matter of fact it is 10 per cent. poorer than either of them), we can ascertain accurately the quantity of heat which a wall of any given thickness will allow to escape. Thus a wall of brickwork four inches thick, having one surface at 60 degrees and the other at 20 degrees, will transmit $(4.83 \times 60 - 20 \div 4) = 48.3$ units per square foot per hour. Mineral wool in place of the brickwork gives $(0.323 \times 60 - 20 \div 4) = 3.23$ units per square foot per hour. From the result it is plain that the brickwork would have to be forty inches thick to retain the same amount of heat that four inches of mineral wool do. This illustration does not exceed the limits of truth. It brings out the fact—one difficult to reconcile with our general notions in this regard—that all materials are conductors of heat, and differ from each other only in degree. Stone and marble are such high conductors that, if placed around pipes, the loss with all thickness is greater than by an uncased pipe, and the thicker the case the greater the loss. There are some concoctions that really appear to have the solidity of stone or marble, and possibly are dispensing heat into space faster than the law requires. The man who wishes to buy a low conductor should keep in mind the law that all good absorbents are bad conductors, and when one of the so-called "non-conductors" is offered him, to fill a tumbler to the brim with water and then immerse a large piece of the material in it. If the substance under trial is a very low conductor the water will not spill, but will be absorbed, so that a volume equal to that of the tumbler may be immersed. The Queen Anne cottage, which is so popular among architects, is not designed for the comfort of the occupants. Unless the low roof is filled in with mineral wool the rooms on the second floor of this house will be insufferably hot, and, while the architect is really to blame, not so particularly for sacrificing everything to looks, but for ignoring the fact that the sun's heat is certain to be transmitted, still there is no use ever expecting him to give attention to insulation, because the part of the house devoted to this object is bound to be hidden, and his profession does not thrive on the invisible. The owner is the proper one under the circumstances to see that the hollow walls of his balloon frame residence are filled with some poor conductor both of heat and sound. By using mineral wool he would not only have the most efficient barrier against the passage of heat, but render the house secure against fire attack and free from the inroads of rats, mice and insects. Not only would these desirable objects be accomplished, but in a few years the expense of such a filling will be offset by the economy of heating and reduction or absence of insurance.

TRADE LITERATURE.

For Trap Shooters, etc.—A handy book for sportsmen and trap shooters is about to be issued by the King Powder Co. of Cincinnati, Ohio. This booklet will be handsomer and more complete than those of its kind that have been previously distributed. It will contain all the game laws, trap rules and general information of much interest to that class to whom it is addressed.

Manufacturers' and Machinists' Hardware. Most complete with illustration, description and price-list is the new catalogue of Messrs. Charles H. Besly & Co. of 10 N. Canal street, Chicago. This firm's line of manufacturers' and machinists' hardware, brass and copper in rolls, sheets, rods, tubes and wires, seamless tubes in brass and copper, fine tools for metal-workers, platers', polishers' and grinders' supplies is thorough in its character. Copy on application.

Drafting-Room Furniture.—One of the demands of the day is for complete furniture and accessories for the drafting-room, a department which in these days finds its place in the establishment of so many thousands of firms and corporations. There has been issued an illustrated catalogue and price-list of drafting-room tables, blue-print frames and apparatus for exposing them, filing cabinets and other appliances for simplifying and facilitating the work of those persons whose duties require articles of this kind. The F. W. Emerson Manufacturing Co. of Rochester, N. Y., issues the book referred to.

Engine and Turret Lathes.—One of the most important tools of the modern machine shop is the lathe. Engine and turret lathes especially are widely used, and progressive establishments always aim to have the most improved patterns of this tool in their

equipment. The engine and turret lathes of the Rahn-Mayer-Carpenter Co. of Cincinnati are constructed of the best material by aid of the best appliances and the most skilled workmen, and the company endeavors at all times to keep its product unsurpassed in strength, accuracy and other points desired by the machinist. A recent catalogue illustrates and describes this company's machines.

Racine Automatic Engines.—These high-grade vertical automatic engines are especially adapted for operating electrical apparatus, both direct-connected and belted, although they are equally well suited for other purposes requiring uniform power, close regulation and extreme economy. In a recent booklet the Racine Hardware Co. of Racine, Wis., the maker of this engine, has illustrated this apparatus in a most effective manner. There is shown the neat and compact arrangements adapted for direct connection, also for belted units. The governor used is the "Rites patent," guaranteed to a regulation within $1\frac{1}{2}$ per cent. from no load to full load; sizes two to thirty-seven horse-power. If you are interested ask for literature.

For Hydraulic Jack Users.—In line with an announced policy of sectional catalogues there has been issued a new catalogue subsidiary to the illustrated index of the Watson-Stillman Co. of 204 E. Forty-third street, New York city. This catalogue is an hydraulic jack assortment of illustrated sheets, as stated on title page, the new matter consisting of the preface and alphabetical index at the beginning of the book, additions to list of sizes of jacks common with the jack lists, etc. The company's full line of hydraulic tools and supplies includes the Vreeland patent transfer pit jack, improved pulling jack, pit jack for engine trucks, plain hand-power lift, street-car motor lift, tube expanders, gauges, cup packings, etc. Send stamp for catalogue No. 54.

Cork Floors and Tiles.—Nowadays building supplies are frequently of such a nature as to combine the merits of both durability and ornamentation. Flooring and tiling finds its place in every modern house of any pretensions whatever to completeness. In this connection it is desired to call attention to the cork floors and tiles of the Cork Floor & Tile Co. of the Gerken Building, West Broadway and Chambers street, New York city. A leaflet recently issued treats of the company's product. These floors and tiles are patented and claimed to be elegant in appearance, absolutely noiseless and water-proof, thoroughly sanitary and extremely durable; in fact, claimed to wear longer than stone or marble tiles. Send for leaflet descriptive of this product; it will interest you.

Vitrified Tile Conduits.—Those about to install a conduit system or enlarge a present one will find of much interest a catalogue recently issued by the American Vitrified Conduit Co. of 39 Cortlandt street, New York city. This company's product consists of vitrified salt-glazed underground and interior conduits, and it acts as contractors for complete installations of such systems. Comparative points of superiority claimed by the manufacturer for these conduits is perfect alignment, freedom from deterioration, smoothest possible surface, least frictional resistance, high insulating properties, needs no repairs or renewals, flexibility in getting around obstructions, protection from short circuiting and grounding; also fire, acid, gas and water-proof. Send for booklet.

Development of the Electric Fan.—One of the features of the advent of electrically-driven machinery has been the development of the electric fan. Originally the pulley-driven fan appeared to fulfill the requirements of the purchaser; soon, however, the steam fan, with direct-connected engine, displayed its utility, but today the fan driven by an attached motor is rapidly supplanting the steam fan. Progress along this line has been largely assisted by the B. F. Sturtevant Co. of Boston, which claims to be the largest manufacturer of fan blowers in the world. For the past ten years this company has been gradually but surely perfecting designs and keeping abreast of the times in this important branch of engineering. Recent publications, such as their Bulletin H, I and M, display the features of Sturtevant electric fans.

Dixon's Graphite Productions.—Numerous are the productions from graphite, sometimes called plumbago, or oftener black lead. These productions have entered into industrial life very extensively, being used for lubricating purposes, for the manufacture of pencils, for making oils and greases,

paints, cements, polishes, etc. The plant of the Joseph Dixon Crucible Co. of Jersey City, N. J., where its works and general offices are located, is probably the most important manufacturer of graphite productions in the United States, and its recent catalogue is most complete in its descriptions and illustrations of the corporation's many graphite productions. Established in 1827, and incorporated in 1868, this enterprise has long been favorably known to the trade and public everywhere, and its experience has developed a large line of graphite goods now in general use throughout the world. Send for catalogue.

Scientific Grinding Mills.—Millers, elevator men and others grinding shelled corn, crushed ear corn, oats, hay hulls, wheat, rye, screenings, corn bran, gluten feed, buckwheat hulls, offals, cut hay and all compound foods will find of much interest a perusal of "Scientific Grinding Mills," a recently issued catalogue. The severe duty required of such machines makes it necessary that their construction shall be only by the most skilled workmen (trained to this particular work) and of the best material (especially as to quality of steel shafts and babbitt boxes). Such methods as are used by the Foss Manufacturing Co. of Springfield, Ohio (which issues the catalogue herein referred to), will be found to embody all that is demanded in the production of complete and satisfactory machines of this class, as has been proven by the corporation's many years of successful experience in supplying users. Send for catalogue relative to the Foss complete line of attrition mills.

Machine Tools for the World.—The general activity which is now so prominent a feature of the industrial conditions of the world makes an increasing demand for machine tools and machinists' tools. In no other line is there the activity which the iron and steel-working trades are now enjoying. This state of affairs necessarily makes busy and prosperous times for the manufacturers of the lines of machinery needed. In recent years American manufacturers have been constantly increasing their sales to foreign countries, and with the late acquisitions of territory following the Spanish-American war the more progressive firms have taken steps to secure a share of this trade. One of the most prominent of our manufacturers of machine tools and machinists' supplies is the U. Baird Machinery Co. of Pittsburg, Pa., and its progressiveness has always been a marked characteristic of its establishment. The company's latest issuance of literature relating to its product is handsomely printed, illustrative and descriptive of the line in four languages, English, German, French and Spanish. Intending purchasers are invited to ask for catalogue. The line shown is thoroughly complete.

Development of Power from Water-flow.—Since the inception of industrial enterprises in this country, and even before then in isolated cases, power has been developed from running or falling water for the operation of machinery. The water-wheel first introduced for such purpose of development of power was crude in form and performed its part with varying degrees of success. Manufacturers of machinery soon turned their attention to the possibilities of the water-wheel, and some most efficient forms of this device have been introduced to users at divers times, until the modern turbines have come into most extensive use. The South is now following New England in the active development of the many promising water-powers, and it behooves those engaging in such development to seek out the most improved and efficient forms of the turbine in order that their enterprise may not lack the element of success in that direction. Messrs. Norris, Burnham & Co. of Glen Rock, Pa., manufacture the new improved "Standard Turbine," originally patented in 1867 by N. F. Burnham, and improved each year, until now they claim to have a device that is superior to any other of its class offered. The firm's recent catalogue and booklet speaks at length of their turbine, illustrating and describing it fully.

Condensing Apparatus.—Since the advent of cooling towers it is possible, and, in fact, highly desirable, to give every steam engine the benefit of a vacuum, whether the water supply is fresh, salt or entirely lacking. It is well to use a jet condenser where the water supply for condensation is fresh and of sufficiently good quality for boiler feed; a surface condenser where a supply for condensation is unfit for boiler feed and distilled water from the condenser is necessary for that purpose, and a self-cooling condenser

where the entire water supply is limited to boiler feed, there being no sufficient natural water supply of any kind for condensing purposes. The entire practicability of these several methods is plainly shown by the many examples given in the pages of a recent pamphlet. It is desired to call special attention to the Central Condensing System shown in a number of the illustrations in this pamphlet. This new system is particularly adapted to large plants, the main feature being to produce in one condenser the condensation of the exhaust steam from several engines of the plant located perhaps at a considerable distance from each other. It is economical and very simple and practical. A Central Condensing System may comprise surface, jet or self-cooling condensers, according to the conditions of water supply. It is also desired to say that Henry R. Worthington of New York is in readiness to give prompt and careful attention, without charge, to the survey of any plant where non-condensing engines are now in use, or where new engines are to be installed. It is due to the careful inspection thus made by such of the Worthington corporation's engineers as have given this subject especial study that enables it to point to the uniformly high and satisfactory results which have thus far obtained. Send for the illustrated pamphlet.

Preface With a Purpose.—So often does a preface bear evidence of having been written merely to fill the allotted space that a frank statement like the following is refreshing. It is from catalogue No. 99, entitled "Steel Pressure Blowers," published by the B. F. Sturtevant Co., Boston, Mass., and is denominated "A Preface With a Purpose." "A third of a century has elapsed since the Sturtevant steel pressure blower was first introduced as an indispensable factor in many manufacturing processes. Of the greatest importance has been its influence upon cupola practice. Before its advent the rotary blower and the blowing engine were the only devices available for the production of blast sufficient for the melting of iron. It was at once asserted that the fan blower could not create sufficient pressure, was less efficient and less serviceable than the rotary blower. But Mr. Sturtevant, with characteristic energy and zeal, soon disproved these statements, made the fan an active competitor and soon the worthy successor of the rotary blower; and all this because the merits of the fan were emphatically proven, clearly presented and readily appreciated." The Sturtevant catalogues of 1870 and 1873, which carried such conviction, have long been out of print. In order that the inquiring foundryman of today may be in possession of the facts that exhibit the superiority claimed for the fan, this catalogue has been prepared. In that portion which relates to the advantages of the Sturtevant steel pressure blower, a method by no means common among catalogue-makers is pursued. Usually the character and extent of the claims which are made for a given machine are measured only by the discretion of the writer in his attempt to outdo his competitors, and in his presumption that the purchaser will fail to discover the facts. Here exactly the opposite course is followed, and no direct claim whatever is made. But absolutely impartial and far stronger evidence of superiority is given in the quoted words of men of experience, words which in each case were spoken or written under conditions that precluded the expression of anything but sober judgment. Throughout the earnest endeavor has been made to avoid all appearance of prejudiced judgment. The facts as regards efficiency, durability, convenience, weight, cost, relative preponderance of Sturtevant blowers in use, etc., are here given exactly as made by unbiased witnesses, whose sole object has been to tell the truth, regardless of influence.

Single Fare to Baltimore and Return via Pennsylvania Railroad, Account Presentation of Sword to Captain Dyer of the U. S. S. "Baltimore."

For the occasion of the presentation, on September 12, 1899, of a sword of honor to Captain Dyer of the United States cruiser "Baltimore" for his heroic action in the "Battle of Manila," the Pennsylvania Railroad Co. will sell special excursion tickets from stations on its line in the States of Maryland, Delaware, the District of Columbia and the State of Pennsylvania as far north as York, to Baltimore, at rate of single fare for the round trip (minimum rate, fifty cents). Tickets will be sold September 11 and 12, and will be good to return until September 13, inclusive.

FINANCIAL NEWS.

The Manufacturers' Record invites information about Southern financial matters. Items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

New Corporations.

A new bank having capital stock of \$50,000 is to be started at Moorhead, Miss.

S. L. Wooldridge and others have organized the Woodford Bank of Versailles, Ky., organized with \$30,000 capital stock. The Bank of Mt. Pleasant, Mt. Pleasant, Tenn., has been incorporated, with \$25,000 capital stock, by Bethel Howard and others.

The Lynchburg (Va.) Trust and Savings Bank, according to report, has opened a branch bank at Monterey, Highland county.

The Southern Maryland Savings Bank of La Plata, Md., has been incorporated, with \$25,000 capital stock, by Adrian Posey and others.

The City National Bank of San Antonio, Texas, has been organized with \$100,000 capital. J. T. Pryor is president and J. D. Anderson, cashier.

The People's Building and Loan Association of Grenada, Miss., has been incorporated, with \$100,000 capital stock, by W. F. Hallam and others.

R. H. Wildberger and others have incorporated the Clarksdale Building and Loan Association of Clarksdale, Miss., with a capital stock of \$100,000.

H. W. Rountree is president and J. M. Swanson is treasurer of the Virginia Society Endowment Co., organized at Richmond, Va., to issue debenture bonds.

The South River Bank of Waynesboro, Va., has been organized, with Theodore Coyner, president, and R. G. Vance, cashier. The capital stock is \$20,000.

The Bank of Brooksville has been organized at Brooksville, Miss., with \$50,000 capital to begin business October 1. G. F. Heard is president and A. C. Dugan is cashier.

The Boston-Kansas City Cattle Loan Co. has been incorporated at Kansas City, with \$100,000 capital stock, to buy and sell cattle paper. Charles Weil is president and T. H. Beekman, general manager.

New Securities.

Sedalia, Mo., will vote September 12 upon an issue of \$24,000 4 per cent. sewer bonds.

The board of supervisors of Scranton, Miss., has authorized the issue of \$8000 jail bonds.

Colorado county, Texas, will vote this month upon the issuance of \$30,000 bridge bonds.

The issuance of \$10,000 electric-light bonds of Odessa, Mo., will be voted upon September 12.

Rudolph Kleybolte & Co. of Cincinnati have purchased \$270,500 refunding bonds of Tampa, Fla.

The \$6000 6 per cent. 20-year school bonds of Elba, Ala., have been awarded to J. F. Sanders of Elba at 101.

Christian county, Kentucky, will vote at the November election upon the proposition to issue \$200,000 turnpike bonds.

The treasurer of Lincoln county, Georgia, will receive bids until September 15 for the purchase of \$3000 8 per cent. six-year bonds.

Gilbert D. Raines and associates of Memphis, Tenn., have purchased \$125,000 worth of bonds issued by the St. Francis levee board.

The issue of \$25,000 8 per cent. water-works and fire-protection bonds of Pratt

City, Ala., has been awarded to Charles H. Collins of Chicago at 102.1.

W. J. Hayes & Sons of Cleveland, Ohio, have purchased the issue of \$5000 6 per cent. indebtedness bonds of Johnson City, Tenn., at the rate of 104.

Theodore K. Thompson, city auditor, will receive proposals until September 16 for the purchase of \$300,000 5 per cent. sewer bonds of Galveston, Texas.

Bids will be received until September 14 for the purchase of 1000 shares of stock in the Durham & Northern Railway Co., owned by the city of Durham, N. C. Address George W. Woodward, city clerk.

W. P. Fowkes, sheriff of Upshur county, Buckhannon, W. Va., will open bids October 2 for purchase of \$20,000 of 5 per cent. courthouse bonds; each bond for \$500; interest payable annually; 20-year bonds; payable at option of county after five years.

Financial Notes.

The Atlantic & North Carolina Railroad has declared a dividend of 2 per cent. on \$3,000,000 capital stock.

The American Car & Foundry Co. of St. Louis, Mo., has declared a dividend of 1 1/4 per cent. upon the preferred stock.

The clearings of the Kansas City (Mo.) banks amounted to \$57,749,838, an increase of nearly \$11,000,000 over those of August, 1898.

Nine bids from St. Louis banks for the city's deposits in the year ending September 1, 1900, made the average interest offered 2.12 per cent.

The applications for stock of the Eagle and Phenix Mills at Columbus, Ga., were double the amount of the \$150,000 additional stock authorized at the last annual meeting.

It has been decided to consolidate the National Bank of Virginia with the Citizens' Exchange Bank of Richmond, and to increase the capital from \$300,000 to \$500,000.

The Concordia Loan & Trust Co. of Kansas City, Mo., will hereafter be known as the Fidelity Trust Co., and its capital stock will be increased from \$100,000 to \$500,000.

Holders of the first-mortgage bonds of the West Virginia & Pittsburg Railroad Co. have been notified to present the same for payment within thirty days. They amount to \$72,000.

The Maryland Casualty Co. of Baltimore has acquired the unexpired risks of the Union Casualty & Surety Co. of St. Louis, except those of plate glass and personal accident insurance.

The clearings of the Atlanta (Ga.) banks during the first eight months of this year amounted to \$49,662,117.86, an increase of more than \$5,000,000 over those of the same period last year.

In connection with the meeting of the American Banking Association at Cleveland this week was held a conference of the representatives of the clearing-house association to discuss the establishment of national or State collection agencies.

The Virginia century bonds, which were sold in 1892 at less than 50 per cent. of their face value, have reached 86 1/2. Of the \$18,000,000 of the bonds, more than \$6,000,000 have been registered for permanent investment, and at least \$10,000,000 are held in Virginia.

The gross earnings of the Philadelphia, Wilmington & Baltimore Railroad for July, 1899, show an increase of \$35,400 over those of July, 1898; of the Northern Central Railway, \$83,300, and of all the lines directly operated by the Pennsylvania Railroad, \$919,400.

TABLE OF CONTENTS.

EDITORIAL:	Page.
In Optimistic Strain.....	113
The Cotton Year.....	113
An Iron Prophecy.....	113
Birmingham a Model.....	113
The Huntsville Convention.....	113
Advice to the Point.....	114

The Dominant Factor in Commerce.....	114
British Iron and Steel Institute.....	115
Two Advances in Price.....	116
Eastern Iron Markets.....	116
Southern Electric Plants.....	116
Activity in the South.....	116
The Huntsville Convention.....	117
Opportunities at Hamburg.....	117
Literary Notes.....	117
Twelve Months' Cotton History.....	118

RAILROAD NEWS:

A Handsome Depot.....	120
In a Timber Region.....	120
Wilmington to Southport.....	120
Cape Henry and Norfolk.....	120
New Road Suggested.....	120
The Pennsylvania to Control.....	120
Its Purpose Declared.....	120
Mr. Emerson Chosen.....	120
Railroad Notes.....	120
The South's Potentiality.....	120

COMMERCE:

Outlook in Cuba.....	121
For West India Trade.....	121
Galveston's Shipping.....	121
Mobile's Wharves.....	121
Jottings at the Ports.....	121

TEXTILES:

That Consolidation at Cedartown, Ga.	121
President Winston's View.....	121
Columbia's Latest Mill.....	121
Cotton Mill at Denison, Texas.....	121
Textile Notes.....	121

PHOSPHATES:

Phosphate and Rosin.....	122
In the Tennessee Field.....	122
Phosphate Markets.....	122
Phosphate and Fertilizer Notes.....	122
American Bankers Meet.....	122

LUMBER:

Lumber Market Reviews:	
Baltimore.....	123
Jacksonville.....	123
Mobile.....	123
Beaumont.....	123
Lumber Notes.....	123

COTTONSEED OIL:

The Market for Cottonseed Products.....	124
Cottonseed-Oil Notes.....	124

MECHANICAL:

A Perfect Water Column (Illus.).....	124
Modern Turbines (Illus.).....	124

CONSTRUCTION DEPARTMENT:

New Enterprises.....	125
Building Notes.....	127
Railroad Construction.....	127
Machinery Wanted.....	128
Trade Notes.....	128
Trade Literature.....	129

FINANCIAL NEWS:

New Corporations.....	130
New Securities.....	130
Financial Notes.....	130

Niagara Falls Excursions—Low-Rate Vacation Trips via Pennsylvania Railroad.

September 7 and 21 and October 5 and 19 are the dates of the remaining Pennsylvania Railroad popular 10-day excursions to Niagara Falls from Baltimore.

Excursion tickets, good for return passage on any regular train, exclusive of limited express trains, within ten days, will be sold at \$10 from Baltimore. A stop-over will be allowed at Buffalo, Rochester, Canandaigua and Watkins within the limit returning.

A special train of Pullman parlor cars and day coaches will be run with each excursion. An extra charge will be made for parlor seats.

An experienced tourist agent and chaplain will accompany each excursion. Tickets for a side trip to the Thousand Islands (Alexandria Bay) will be sold from Rochester in connection with excursions of September 7 and 21, good to return to Rochester or to Canandaigua via Syracuse within five days, at rate of \$5.50.

Tickets for a side trip to Toronto will be sold at Niagara Falls for \$1 on September 23. In connection with excursion of September 7, tickets will be sold to Toronto and return at reduced rates, account Toronto Fair.

For pamphlets giving full information and hotels, and for time of connecting trains, apply to nearest ticket agent, or address B. Courlaender, Jr., passenger agent, Baltimore and Calvert streets, Baltimore.